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MEDICAL MONTHLY.

(RICHMOND.)

VOLUME X,

From April, 1883, to March, 1884, inclusive.

LANDON B. EDWARDS, M. D.,
WILLIAM H. COGGESHALL, M. D., } *Editors and Proprietors.*

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VIRGINIA

MEDICAL MONTHLY.

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RICHMOND, APRIL 1883.

Original Communications.

ART. I.—**Disease of Inebriety.** By T. O. CROTHERS, M. D., Superintendent Walnut Lodge, Hartford, Conn.

In a late number of the *Sanitarian* is an editorial entitled "Sentimentalism in Intemperance," which undoubtedly does great injustice to the reading and intelligence of its author. The author affirms that "to call inebriety a disease, is to furnish an apology for inebriates, and that this is a growing and exceedingly mischievous means of removing the very evil which it claims to evert."

This is equal to the views of a clergyman, in Boston, in 1836, who pronounced insanity a crime and an organized type of sin and wickedness, affirming that insane asylums were causing more insane by favoring the false notion of irresponsibility and disease.

The author reasons that a condition of disease may be present, as the result of long excesses in the use of spirits, but that the early stages were always phases of vice and a low moral nature.

The same reasoning pronounced the insane possessed with evil spirits, until dementia or mania appeared; and then a

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pathological state was present that possibly might be benefitted by medical care and treatment.

The dogma which ignores all reign of law, in mind and matter, and ascribes all that is mysterious and unknown to spiritual forces and spiritual conditions of the human heart, still lingers, a vestige of the superstitions of the past.

The theory of the disease of inebriety was mentioned over twenty centuries ago, and is not founded on the opinions of clergymen and inebriates themselves, but can be proven in the natural history of cases in the observation of any one. All theories as to the nature and character of inebriety not based on accurate clinical study, from a scientific and physical point of view, are false and misleading. All suggestions as to modes of treatment and cure, based on vague and confessed notions of vice, sin and disease, are unworthy of any consideration.

The studies of the last few years have brought out the following facts, which are fully established, and are amply confirmed by the clinical histories and natural progress of each case:

(1.) Inebriety is a disease of the central nervous system, of which alcohol is, in different cases, either an exciting cause, or the demand for it, a symptom of progressive degeneration that is pronounced in all its phases.

(2.) It begins from certain physical and psychical causes, which may be defined and understood, following a progressive march from stage to stage, ending in death or extinction.

(3.) A study of these ætiological influences will point out the necessary treatment and prevention.

It is dogmatism to assert what inebriety is, or is not, based on popular opinion growing out of the theories of clergymen and inebriates themselves. The mysteries of the origin and progress of inebriety can never be explained by theology any more than can typhoid fever or phthisis. The inebriate who becomes a temperance reformer and talks glibly of the nature of inebriety, is no more an expert of this malady than the insane would be of insanity.

Inebriety does not spring out of the moral nature, or from conditions of degeneration of the so-called higher faculties

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of the brain. Inebriety does not depend on the excessive use of alcohol for development. The craving for any form of spirits may burst out without premonition, and be the sign of exhaustion or degeneration of the nerve centres. It may, and it does, often follow disease, injury, shock of any kind, as well as any profound disturbances of the functions of the organism. The first excessive use of spirits may give form and direction to states of exhaustion, like the germ-cell in favoring soil, exploding and developing disease. Inherited states may remain dormant until exploded by a single glass of spirits. Favoring conditions of organization and environment may occur at any time, which will bring on inebriety in all conditions of life. Many diseases of the brain and nervous system, and general affections of the organism, are followed by inebriety, either as a sequel or symptom. The intimate relation between inebriety, all forms of consumption, heart-disease and affections of the stomach, brain and nervous system, point unmistakably to the constitutional nature of the disorder. A study of the chemical and pathological action of alcohol and the organism brings additional proof of the cell-degenerations and perversions which are manifest in inebriety.

A very wide domain of facts stretch out before us that are full of mystery and are unknown. Here, as elsewhere, we know that physical law reigns—that all the many phases of inebriety are indications of disorganized and diseased activities. A very general history of cases will convince any one of the physical nature and character of the disorder.

In support of these statements, the following cases are selected from our case-book, which are not as peculiar or different from the average class, but are given in outline more for the purpose of suggesting study, than as complete histories:

CASE I.—A lawyer and broker, forty-eight years of age, married with family, was admitted suffering from extreme exhaustion, muscular tremblings and suicidal impulses. He had been drinking continuously for many weeks, and was alternately delirious and stupid. From his friends, it was ascertained that his parents were temperate, and no special heredity was present. Nothing significant occurred in his

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life until he was thirty-two years of age, when he lost all his property in Wall street. He began to use spirits at this time, and for the next ten years he struggled with variable success—at times wealthy and then much reduced. About six years before admission, he began to associate with fast company, and drank at times to great excess. He was a church-member, and a devoted husband and father, and seemed to feel keenly the disgrace of his conduct. Although he sought help from the church, his pastor and family in vain tried to persuade him to desist from drinking; but he grew steadily worse. Every inducement was brought to bear to help him to check this desire for drink, but without success. His family physician wrote me "that the habit had become so fixed, that he must be made to feel the humiliation of his course before he would exercise his naturally strong will, and thus recover. He was in ordinarily good health, except as to the immediate effects of alcohol, from which he could quickly recover." Such was the history from his friends and physician.

More minute inquiry revealed the following facts:—His grandfather on his mother's side was a *moderate* drinker all his life. His mother died at thirty-two years of age of consumption. Two uncles were feeble-minded, and one died in an insane asylum. On his father's side, his grandfather and uncles were restless adventurers, wandering up and down as leaders of every new scheme of ambition and wealth. They drank at times to great excess; then led the most enthusiastic reform movements.

The early life of this patient was noted by a severe attack of measles at fifteen years of age, from which he never fully recovered—always complaining of general neuralgia and weakness following any over-exertion or excitement. He had, in all probability, drank moderately and at long intervals up to the time of his business failure. The shock and depression following this event found relief in alcohol. He drank to intoxication, and conditions of degeneration began which went on progressively. Cares and business troubles, with their necessary neglect of the healthy functions of the body, were the ever-present exciting causes. He drank at night, after the work of the day was over; and while disliking the taste of alcohol, he affirmed that the effects gave him relief from a general agony and pain which he could not describe. After the occurrence of trouble he used more spirits when alone; but if successful in business, and when in company, he would abstain for some time. So great were

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his exertions to help himself, that after a day of excitement in Wall street he would spend the evening in some revival meeting to keep his mind from reverting to spirits. But frequently, after coming home, he would be greatly intoxicated in a short time. When finding that he was becoming delirious from the effects of alcohol, he would give minute directions to his wife to admit no one, and then cover his head with blankets, as if to conceal his condition.

As he grew older a periodicity of impulsive drinking appeared, and after one of these periods began he sought low society and low haunts. In two days he would become so much exhausted that he would abstain. Then a short period of great contrition and efforts to recover would be followed by exhaustion and relapse.

The history of his disease dated from the first intoxication at the time of his business failure. He clearly inherited a defective nerve organization, which was in some unknown way greatly injured by the effects of the measles. Conditions of nerve exhaustion and neuralgia showed an impaired vigor. The secret use of alcohol in moderation was a favoring influence. Finally, the shock of failure and disappointment, with the consequent depression and the toxic action of alcohol, both exploded and fixed all the diseased tendencies of the past. The subsequent periodicity and great moral lapses were only stages of the rapid progress of degeneration.

A special diathesis and the failure of the nerve centres were a marked sign, which should have been seen by his physician. Alcohol was used for its sedative action, and to relieve a physical agony or pain that could not be described.

The case progressed well for three months, and against all advice he returned to his office on Wall street, relapsed, and died of pneumonia within a year.

Case II.—A farmer's son, twenty-two years of age, who, from proximity to a low tavern and association with bad company, was supposed to have contracted a habit of drink. His family physician came with him to this Asylum, and was confident he was simply vicious and "the victim of evil habits." On admission he was pale, anæmic, and very sensitive. He had delusions of persecutions, could not sleep, and was much exhausted.

In a study of his case it appeared that both parents were healthy, but of very narrow intelligence, fanatical in their religion, and intensely selfish. The grandmother on the

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mother's side was insane, and all the family were peculiar. On the father's side there was a marked history of hysteria and epilepsy, and the family were notorious for their impulsive and almost ungovernable appetites. From his boyhood he had perverted tastes—sometimes using one article of food for days alone, then changing to another. He would drink ginger and water, and mustard and water, with pleasure. When sixteen years of age he ran away with a girl and remained concealed at a hotel for two days, living with her as man and wife. On returning home he began to drink to great excess. His parents were very unreasonable and foolish in their efforts to check him; and in exact ratio to the intensity of their means to prevent him, the greater became his desire for spirits. A sense of humiliation and constant reprimand kept up an atmosphere of great irritation and depression. This, with hard farm-work, brought on a physical condition which was most easily relieved by alcohol. In the asylum he suffered regularly every week from depression and intense desire for spirits. This came and went with uncertainty and suddenness. He remained four months under treatment, and was greatly improved. Two years after he was still sober, living in the far West.

The heredity of a defective nerve organization was clear. The use of alcohol, after the shock of the first sexual act, followed by depression, was in the nature of a discovery—a medium which brought relief. Ever afterwards, when depressed, he sought this drug for its anæsthetic effects. This condition was foreshadowed in early life in the defective nutritive tastes. Alcohol developed and exploded a diseased condition which had been gathering from the past. The bad surroundings of home and the injudicious measures to help this man were the exciting causes of his inebriety.

Case III—Was a clerk in a bank, thirty-nine years old. He was delirious when admitted. He supposed he was in a prison for crime. His physician said he was merely dissipated from drink and gambling, and would recover in a few weeks. His history indicated a hereditary taint from his father, who died of paralysis, as well as an uncle who was an epileptic, and the grandfather on his mother's side, who drank severely. He had severe convulsions when a child from teething; and when six years old he had many so-called "fits," dating from "a fall on his head." He was temperate up to the date of his marriage at twenty-one, when he began

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to use bitters for dyspepsia and debility. About this time he was intoxicated for the first time in his life, and he suffered from a low form of fever for several days afterwards. From about this date he used spirits at home, and on all occasions of general pleasure, of "ill health and general depression." The bitter opposition of his wife and other relatives drove him to drink at public "bars," and soon after he spent most of his evenings away, and would come home under the influence of spirits. This condition became rapidly worse, and finally he commenced gambling, and he drank more or less all the time. He remained under treatment four months, and now, a year later, he is doing well.

A strong hereditary taint was present, which was fixed and developed by the first toxic use of alcohol. This was shown by the low form of fever which followed its use at first. The domestic trouble and surroundings seemed to precipitate and intensify the disorder.

Some change began soon after the marriage in the brain-centres, and was manifest in altered nutrition, for which bitters were found to be a potent remedy. Finally, intoxication, or profound toxic action of alcohol, became the starting point of inebriety.

In both of the two latter cases the period of treatment only arrested the disease for a time, which in all probability will break out again some time in the future.

CASE IV.—A manufacturer who had lately failed was brought to the Asylum; age forty-six years. He had drunk excessively for a long time, and was under the influence of alcohol continuously. His history, as detailed by his friends, was that he began to drink when he became prosperous. Through bad company and ill advisers, his physician thought that the bad associations of great wealth had caused his ruin. He made many efforts to stop dissipation, but he always failed of success.

A clinical study of his case showed no evidence of heredity. He was always nervous and sensitive, but in good health. He was liberally educated and was a student of divinity, when he entered the United States Army and was soon promoted to a Captain. During the two and more years of his service he suffered from typhoid fever and malaria, and he was twice unconscious from concussion, because of injury to the brain. On one of these occasions he was hurled some distance by the explosion of a shell, and, although not hurt externally, he suffered from temporary paralysis and prostration for many days.

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In another instance he was struck by a shell, and the muscles were bruised, but "recovered" after a month of treatment in the hospital. At the close of the Confederate war he went to Kansas as a stock-farmer, and here drank to intoxication for the first time. At intervals he continued to use spirits to excess for five years; he then came East and engaged in manufacturing. He married and lived a temperate, sober life, working hard, occasionally using beer at night for his health. He became involved in a very hazardous scheme for controlling the market of all the goods in a certain line. He was very energetic and worked night and day for a long time, and was rewarded by immense gains. The reaction from this strain was due to excessive use of spirits and associating with low company. Six years later he failed; after this he was brought to the Asylum as a chronic inebriate. The injury and irregularities of Army life were the starting point of the inebriety. This was checked until the strain and excitement of business kindled it into activity again.

The cases were misunderstood until studied, but they had an unmistakable physical causation. The lawyer inherited an inebriate diathesis and suffered from profound neurasthenia, which ran readily into inebriety. The farmer's son inherited a defective nerve-and-brain force, which was still farther disordered by bad training and surroundings. Alcohol used after the shock of the first sexual intercourse developed into inebriety, which was farther provoked by every source of exhaustion. The bank clerk had inherited a defective organization, and alcohol was used in an obscure state of the body, evidently acting in some traumatic way, producing injury and continuous drinking ever after. In the last case injury to the brain-centres was clearly the cause. Later mental strain developed it into activity. These are common, ordinary cases, termed by non-experts drunkards, vicious and willful. Yet, when attentively studied, they each have a positive physical history. Only the outline histories are given for want of space. They clearly point out two facts:

1. That inebriety should be studied as a physical disease before any intelligent comprehension of the cases can be had.

2. From such a study we shall learn the means and methods for its practical prevention and cure.

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ART. II.—**Therapeutics of the Pharmacopœa.** By LAURENCE TURNBULL, M. D., Ph. G. (Class of 1842), Aural Surgeon Jefferson Medical College, etc., Philadelphia.

The subject of Therapeutics of the Pharmacopœa is a comprehensive one, and if fully carried out would require many lectures; but this is not my intention. I simply have desired to offer some hints in reference to the action of certain agents employed in medicine, so that the graduate in Pharmacy shall be incited and helped to study the subject for himself, and shall be able to advise and act in concert with the physician—not to take his place, except in an extreme emergency A certain knowledge of the physiological and medical action of the drugs the pharmacist dispenses and their toxicological effects, with the antidotes, is absolutely necessary as a part of his scientific education.

Physicians, owing to their peculiar avocation, are liable to preoccupation of mind, and this is especially so if he is attending cases of critical diseases, or when much exhausted physically from overwork he forgets at times the doses of certain articles and also their toxic action on the system. It is, therefore, well for him to have some one in haste to refresh his memory and prevent his making mistakes. Every one is liable to make mistakes—the dispenser as well as he who orders the medicine. I am happy to state that the relations of the physicians and graduates of Pharmacy in this city are of the most agreeable character. They are ready at all times to give their time, knowledge, and original ideas for the benefit of each other. In no city of the United States are to be found a more highly educated and competent class of men.

Therapeutics.—The term Therapeutics is from the Greek ("I wait upon, I alleviate, I attend upon the sick"). It is that department of medicine, the object of which is the treatment of disease. We at the present day understand it as that department which comprises an explanation of the *modus operandi* of *medicine.* To be a good therapeutist a man must be well versed in every department of medicine and capable of observing and reasoning well.

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The old and tried method in Therapeutics is that of clinical experience, founded upon a careful analysis of cases before and after the administration of a remedy in a certain disease. If the result is favorable, why not use it? This knowledge has been handed down by the members of our profession, and many of the remedies have stood the test of 2,000 years.

Another method is based upon the physiological action of individual drugs upon the human system in health and disease; secondly, the action of the same drugs upon animals. This is considered at the present day the rational scientific groundwork for the treatment of disease.

We consider that neither plan must be absolutely adopted; we must use what is good in both. Long before any experiments were made on animals there were certain facts known—such as the action of sulphate of sodium or Glauber salts, or sulphate magnesia or Epsom salts would purge; that opium would relieve pain and induce sleep; that wine and the spirits distilled from wine would cause intoxication, and that it would restore appetite and relieve fatigue—would take the place of food until the system was ready to receive it. Many drugs exert on the system antagonistic action; as, for instance, atropia—the active principle of belladonna—stimulates the spinal cord but destroys the conducting power of the nerve-trunks. Opium in large doses causes deep stupor and general relaxation, while in the frog it induces tetanic convulsions. Monkeys are not susceptible to the action of strychnia, and the Virginia deer are fattened on the growing tobacco. It is a well-known fact that the goat eats with impunity the poisonous stramonium, and that pigeons are not impressed with opium. The plant hyoscyamus may be eaten without harm by hogs, sheep, and cows, and has but little effect upon the rabbit, while barn-fowls and fish are poisoned by it. Should man or his friends—the dog or cat—attempt to partake of it, it flushes the face, dries the mouth or throat, dilates the pupils, produces a drunken gait, loss of voluntary power, delirium and hallucinations, and in large doses comatose sleep, and ultimately death.

Poisoning by these powerful drugs is treated by evacuating

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the stomach by means of prompt emetics, such as sulphate of zinc; or, when this cannot be had, copious draughts of mustard in warm water should be used. If the stomach-pump can be obtained, this is the most efficient means of removing the offending material. Warmth, by means of hot stove-plates, or bottles of hot water to the limbs and feet, while at the same time ice in bags to the head, or cloths wrung out of cold water should be used. Hot whisky punch with ginger or pepper or brandy, in hot coffee, should be administered to keep up the circulation, and a small hypodermic injection of morphia may be given.

Toxicology.—Aconite and its various preparations, to which we have before referred, with its active principle aconitia, are all powerful poisons. The active principle in the dose of a one-hundredth of a grain causes tingling and dryness of the mouth and over the whole body. If the dose is increased so as to obtain its full physiological effects the symptoms are languor, giddiness, sleeplessness, hazy vision, nausea in the erect position, desphagia (or difficulty in swallowing), pain in the back of the neck and behind the jaw, a glowing, tingling feeling over the whole body, and burning heat in the gullet. Aconitine and pseudo aconitine exert a paralyzing effect upon the peripheral, intra-muscular terminations of the motor nerves, resembling the action of curare. The nerve-trunks are not paralyzed. The respiration speedily declines, and after a few minutes completely ceases. Blood dark violet. The heart finally ceases in death. One-twelfth of a grain of aconitia will kill a good-sized rabbit. We know of the following cases of deaths from its incautious use:

A physician was being treated for acute rheumatism. His wife was administering, according to instructions, so many drops of the strong tincture (Flemming's) of aconite in a table spoonful of spiced syrup of rhubarb. It was in the twilight, and the two bottles were standing on the mantelpiece when she gave him his last dose, as she thought, a spoonful of the rhubarb mixture; but, unfortunately, it was the aconite, and he died almost instantly in convulsions.

Another case occurred in Texas, where two drops were ordered and twenty-five taken with fatal results.

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You are well aware of the case of the late Dr. Lamson, who killed his patient by this agent in small doses.

In April, 1880, Dr. Meyer, of Winschoten, died from a dose of about three or four milligrammes of aconitin nitrate—the preparation of Petit of Paris having been substituted for that of Friedlander, which was intended to be used. The aconitin-nitrate, of Petit, occurs in hard white crystals, soluble with difficulty in cold water; that of Friedlander is a hard, gum-like mass, grayish white in color, and easily soluble in cold water. The chemists, Huizinga and Plugge, who examined the body of Dr. Meyer, were unable to prove the presence of aconitin conclusively, either by chemical reagents or by the physiological tests on pigeons. The preparation of Petit is weaker than that of Dukaynel, though that of Petit was at least eight times stronger than that of Merecks, and twenty or thirty times stronger than that of Friedlander. Therefore, no pharmacist should dispense this powerful agent except from a physician's prescription.

Cures by Faith.—At the present day, as in days of yore, credulity, or a belief in the marvelous, is part of poor human nature's misfortunes; and if there is a mystery and an improbability about a *cure* of a disease, the gullible public will swallow the most absurd treatment. You are constantly being informed, or seeing published in the newspapers, reports of this or that individual having been cured of some deadly malady—either by miraculous interference, as the laying on of hands, or by persistent prayer. Now, we physicians know that there are certain forms of disease, such as chronic rheumatism, chorea or St. Vitus' dance, hysterical forms of deafness, blindness and paralysis, etc., that the powerful exercise of the will can cure; and we have all witnessed the powerful influence of the strong minded physician or layman over that of a feeble-minded, delicate, nervous, or impressible person, who says to him, "Get up and walk; throw away that crutch; get out of that bed; open your eyes, or unstop your ears." This will-power, with the aid of some important anti-spasmodic medicine, piece of metal or apparatus, we have at times worked what would have been at other times pronounced impossible or almost miraculous cures.

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Let me, in conclusion, relate one or two cases of my own, and one reported by the fun-loving physician and poet, Dr. Oliver Wendell Holmes:

"On the church records of the revered old Indian apostle and pastor at Roxbury, John Eliot, I find this entry, under date of 1632: 'Mary Chase, wife of William Chase, had a paralitik humor wh. fell into her backbone, so that she could not stir her body; but as she was lifted, and filled her with great torture, and caused her back to goe out of joynt, and bunch out from ye beginning to the end; of wh. infirmity she lay four years and a half, great part of the time a sad spectakle of misery. But it pleased God to raise her again and she bore children after it.'"

I have submitted this case professionally to Dr. Holmes. As your proclivities will lead you to prefer the doctor's account of it to the apostle's, I will read it to you as the close of my speech:

"296 BEACON STREET, June 3, 1881.

"*My Dear Dr. Ellis:*

"A consultation without seeing the patient is like a murder-trial without the *corpus delicti* being in evidence. You remember the story of Mr. Jeremiah Mason and the witness who had had a vision, in which the angel Gabriel informed him of some important facts. 'Subpœna the angel Gabriel.' So I should say, carry us to the bedside of Mary Chase. But she has been under green bedclothes so long that I am afraid she would be hard to wake up.

"We must guess as well as we can under the circumstances. The question is whether she had angular curvature, lateral curvature, or no curvature at all. If the first, angular curvature, you must consult such authorities as Bryant, De Witt, and the rest. If you are not satisfied with these modern writers, all I have to say is, as I have said before when asked whom to consult in such cases, Go to *Pott*—to Percival Pott—the famous surgeon of the last century, from whom this affection has received the name, by which it is still well known, of 'Pott's disease'; for if a doctor has the luck to find out a new malady, it is tied to his name, like a tin kettle to a dog's tail; and he goes clattering down the highway of fame to posterity with his æolian attachment following at his heels. As for lateral curvature, if that had existed, it seems as if the Apostle Eliot would have said, she bulged sideways,

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or something like that, instead of saying the backbone bunched out from beginning to end. Besides, I doubt if lateral curvature is apt to cause paralysis. Crooked backs are everywhere, as tailors and dressmakers know; and nobody expects to be palsied because one shoulder is higher than the other—as Alexander the Great's was, and Alexander Pope's also

"I doubt whether Mary Chase had any real curvature at all. Her case looks to me like one of those *mimoses*, as Marshall Hall called certain forms of hysteria which imitate different diseases—among the rest paralysis. The body of a hysteric patient takes on all sorts of more serious affections. As for mental and moral manifestations, a hysteric girl will lie so that Sapphira would blush for her, and she could give lessons to a professional pickpocket in the art of stealing. Hysteria might well be described as possession—possession by seven devils, except that this number is quite insufficient to account for all the pranks played by the subject of this extraordinary malady. I do not want to say anything against Mary Chase, but I suspect that getting nervous, and tired, and hysteric, she got into bed, which she found rather agreeable after too much housework and perhaps too much going to meeting, liked it better and better, curled herself up in a bunch, which made her look as if her back was really distorted, found she was cosseted; posseted, and prayed over and made much of, and so lay quiet until a false paralysis caught hold of her legs and held her there. If some one had 'hollered' fire! it is not unlikely that she would have jumped out of bed, as many other such paralytics have done under such circumstances. She could have moved, probably enough, if any one could have made her believe that she had the power of doing it. *Possumus quia posse videmur.* She had played *possum* so long that at last it became *non possum.*

"Yours very truly,

O. W. Holmes, M. D."

Art. III.—**The Prevention of Insanity.** By EDWARD C. MANN, M. D., New York, N. Y., Physician to Sunny Side, a Private Hospital for Nervous and Mental Diseases, Inebriety, and the Opium Habit, 481 Franklin Avenue, Brooklyn, N. Y.

How is the growth of insanity to be checked? During the past twenty years, there has been a decided increase of insanity, disproportionate to the increase of population. The

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increase of insanity over that of population amounts to about 2 per cent.

Educational pressure on the young, to the neglect of physical exercise, the increasing artificial and unnatural habits of living, the great excitement and competition in business, are all tending to induce and multiply nervous diseases—many of which must terminate in mental disease. These causes, and the evils resulting from them, are propagated by the laws of inheritance in an aggravated and intensified form.

It is a significant fact, which I have gathered from a minute analysis and an extended examination of the reports of the various insane asylums throughout our country—many of which I have examined—from the commencement of such institutions up to the present time, insanity is appearing at an earlier age than formerly. The "reports" show that in former years the average period at which the greatest number became insane ranged between the ages of thirty and forty, but an analysis of statistics shows that this average age is coming on at an earlier period of life. It generally appears between the ages of twenty and thirty years. This I suppose to be owing to hereditary influences, which have gradually become intensified by violation of special laws in early life—want of proper training, or too high pressure in education.

If the mother is insane, the disease is more frequently transmitted to the offspring than if the father be affected. The mother's influence in transmitting insanity to girls is more to be dreaded than if the offspring be a boy. Regarding the father, insanity is much more certain to appear in the *male* offspring, if the father be affected, than in the female. Outbreaks of insanity in persons who inherit a predisposition to it generally make their appearance and seem to be in some manner connected with the growth and processes of evolution of the individual at the periods of puberty, childbirth, climacteric period, etc. A predisposition to insanity may be transmitted to the offspring, and under good hygienic and other favorable conditions die out and fail to be transmitted any further.

The parent suffering from mania, the offspring may de-

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velop symptoms of epilepsy or chorea; so that insanity may appear either in the same form in succeeding generations or it may assume an entirely different form, or may assume the form of nervous disease. The nervous diseases most frequently presenting themselves at our hospital as the result of hereditary predisposition have been found to be, aside from the typical forms of insanity, hypochondriasis, apoplexy, paralysis, epilepsy, convulsions, hysteria, chorea, and inveterate and intense neuralgia, with adequate exciting cause. Next to hereditary predisposition I rank, in the present day, as a predisposing cause of insanity, the great mental activity and strain upon the nervous system that appertains to the present age and state of civilization. The want of proper recreation, and the want of sleep, with mental anxiety, plunge many a business and professional man into mental disease at a comparatively early age. Excessive indulgence in alcohol also makes many insane, especially men of fine nerve-fibre and women.

It is very difficult, oftentimes, to find a single cause producing insanity, and we too often lose sight of the collateral causative influence of an attack of cerebral disease, which to me is very important. In most cases of mental disease that we see, I think we find several factors which we cannot separate properly, and which have all played a part in inducing cerebral disease. Statistics, therefore, of our asylums, of the causes of insanity, are too apt to be inadequate and unsatisfactory to the student of psychological medicine, and he will gain more by studying the detailed records of individual cases and extracting his facts from such study. Respecting the cause of insanity among Americans to-day, I think that inheriting a delicate nervous organization far in excess of physique, as a rule, gives rise in modern society to a great increase of the neuropathetic constitution. Overstrain of the brain and excessive use of stimulants are two principal causes of insanity to-day, and also of diseases of the nervous system generally.

For a moral cause to produce insanity seems to me to necessitate an organic predisposition to it, although, no doubt, sometimes a nutritive disturbance of the brain may

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be produced by shocks to the nervous system which may result in mental disorder in a previously healthy person. This I think, however, is a rare occurrence. The five leading factors of mental disease among the masses are unquestionably overwork, meagre fare, lack of ventilation, intemperance, and neglect of moral culture. The more I see of mental disease in its various forms the more am I convinced that the study of its prevention is quite as important as the study of its cure, and that the dissemination of more correct views of the true way of living, and a closer observance of the laws of health and nature would largely diminish its frequency. While we expend great sums of money for the cure and treatment of insanity, we spend nothing for the dissemination of knowledge for its prevention.

Herbert Spencer, in his "Social Statistics," page 413, speaks thus respecting the wise severity of nature's discipline: "Partly by weeding out those of lowest development, and partly by subjecting those who remain to the never-ceasing discipline of experience, nature secures the growth of a race who shall both understand the conditions of existence and be able to act up to them. * * * * * * And by multiplication of such warnings [the warnings of ignrance and its consequence, sickness and pain—E. C. M.] there cannot fail to be generated in all men a caution corresponding to the danger to be shunned. Are there any who desire to facilitate the process? Let them dispel error; and provided they do this in a legitimate way, the faster they do it the better."

Any work that we as physicians do in inducing the public to study the laws of health, to reform their habits of living, to promote the use of baths, to promote temperance, ventilation and due exercise, and to promote a knowledge of the human organism and the laws which regulate it, and in diffusing a knowledge of all the means necessary for the preservation of good health, will produce its exact equivalent of results in the *prevention* of insanity. We shall thus develop in the masses an intelligent, self-helping character, tending to robustness of body and robustness of mind. Nature has attached to ignorance of her laws or their non-

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observance certain penalties, and she always punishes every breach of her laws. All measures which we take to replace ignorance by wisdom will inevitably check the growth of insanity. Were we to have a national association for the prevention of insanity in America, properly organized, and if its objects were faithfully pursued, I consider that it would be impossible to estimate the extent of its influence or the value of its labors. From our long experience and repository of facts it is inexcusable if we cannot obtain some information, or if knowledge cannot be obtained to check the increase of insanity. We, as physicians, must make a business of it and charge ourselves with this specific duty, and continue it from year to year, and although each individual's work may be small, the aggregate result will be immense on our fellow-men.

Insanity is a preventable malady. Primarily, we must not exhaust the brains of children by a cramming process in education, which cannot fail to impair the nutrition of the brain and permanently injure it. An immense harm is done in this way by producing premature mental decay and nervous exhaustion appearing about the age of puberty. We must make parents understand *that brain-tissue degenerations are often separated by long intervals of time from the too intense stimulation of the brain which caused them.* The body must be developed in all its parts and organs if we want healthy minds. At present we are developing a race of children whose nervous system is far in excess of their physique, who are predisposed to the acquisition of nearly all the various forms of nervous disease upon slight exciting causes; and many of these types of nervous disease readily lapse into insanity. See to it, you who are family practitioners, that the children who grow up under your care are developed *physically*, even if it be at the expense of the neglect of early education. It is not the precocious child who makes the strong man mentally. We should discourage all precocity and keep such children from study until they have the foundation of a sound, healthy body; and then avoid over-stimulating the mind by too many studies at once.

A young lady recently came under my care for complete

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nervous exhaustion who was trying to master *thirteen* different branches at once in her most trying period of bodily development. A system of education which allows such nonsense cannot be too severely condemned by physicians. It is absurd for young girls to be put through a cramming process of education which, at the critical period of life, cannot fail to weaken their nervous system; and when this is combined with a society life the result is a superficial education—a broken-down nervous system and an inability in women to go through the trying duties of maternity. It is for the family physician to say which children shall study hard and which shall not. Teachers of the young are not qualified to give any such advice. The prevention of such disease should be the highest aim of the physician, and too often an indifference is displayed by him respecting his duties as a family adviser in such matters.

As to men, I think modern nervousness is largely due to mental anxiety respecting business, the abuse of alcohol and tobacco, and sexual excess. These three things in combination will break down and shatter the strongest constitution and induce ataxy, paresis, and insanity in those who inherit weak nervous systems from their progenitors. Regular hours, amusements to divert the mind from the cares of business, freedom from alcoholic stimulants, nourishing food at regular hours and properly digested, absence from tobacco during the years previous to puberty and until twenty years of age, and daily attention to the bowels with free bathing will keep most men in robust physical and mental health.

The subject of education in its relations to mental disease is a very interesting one. It is very important, as the elaboration of cerebral structure is taking place in childhood and youth, that suitable exercise and stimulation should be carefully applied, so that the brain may be brought to the highest possible development; and while we must remember that brain centres that are not properly stimulated and exercised do not develop, and must insist on proper physical and mental education, and moral and religious training, we must, on the other hand, as carefully avoid undue educational pressure and brain fatigue and exhaustion by over-stimulation—espe-

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cially in badly-nourished or sickly children, or in those who are precocious and excitable, as too many American children are.

It must be carefully borne in mind that injudicious stimulation of the brain in the teaching of children may not only induce nervousness, but even structural disease itself. While I believe most firmly in the advantages accruing from stimulation of the nervous centres by education wisely applied in those who are strong and vigorous, and consider that ignorance produces a poor development of imperfeetly acting brain tissue which tends to degenerate, I deprecate the present cramming process, so common, which too often menaces the mental integrity of naturally delicate children who in a great many cases have inherited a disproportionate development of the nervous system at the expense of their physique.

Art. IV.—**Typhoid Fever.*** By ALEX. HARRIS, M. D., Culpeper, Va.

The time which our paper might reasonably claim your attention, would be too short in which to attempt to travel over the whole domain of typhoid fever; and ignorant of what particular branch or branches of the topic the Association intended to have discussed, I will confine my remarks to its etiology, sanitation and treatment—sanitary and therapeutic.

Etiology.—We encounter this zymosis under the best, as well as the worst sanitary conditions—in the palace of the rich at high elevations, where the air is cool, pure and bracing; the water supply bubbling forth from crystal fountains, and passing down in rapidly descending streams; as well as in the ill ventilated and crowded hut of the poor, in the low land, with surroundings of filth within and without; bad water, bad drainage, and impure air.

The theory of Budd, viz.—that the poison exists only in the evacuations of typhoid patients developed outside of the body, especially in privies, sewers, etc., thence gaining access to the body through air by inhalation, or water by drinking, finds advocates among us. Murchision, on the

*Read before Piedmont (Va.) Medical Association, March 26th, 1883.

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other hand, claims that the germ may be generated *de novo* by the fermentation or decomposition of fæcal matter.

The testimony as to the conveyance of this poison through the medium of drinking water from infected wells, from sewers, by the inhalation of infected sewer gas, and through milk of cows which drink infected water, is considered conclusive by many observers. There are few, also, who doubt its infective quality, through the foul air, filthy clothing and bedding, produced by such unsanitary conditions as we sometimes find in the bed-rooms and surroundings of those whom we are required to treat.

But we find country doctors holding widely diverse views as to its causation,—A few averring that the germ may be generated *within* the system—the majority, however, acknowledging *infection* and *contagion* (in the strict construction of the terms), each a competent factor.

Dr. Bedford Brown, now of Alexandria, Va., says: "I have many reasons to believe that typhoid fever may be generated spontaneously within the system." And in support of this opinion, he gives the history of two cases, occurring on a high mountain point, where sanitation was perfect and infection and contagion excluded.

The paper of Dr. Bramblett, of Pulaski county, published in the *Virginia Medical Monthly* for May, 1877, reports a series of cases strongly sustaining the doctrine of its origin *de novo*. He says, "these cases cannot be traced to drinking water contaminated by sewage, they cannot be traced to filth about the premises, as cesspools, pig-styes, etc., they cannot be traced to any case of typhoid fever in the neighborhood as a source of infection either directly or indirectly. None of them had been from home, nor had any case of fever been imported." He admits that it may have resulted from ordinary fæcal decomposition, in neglected privies—though they were sometimes forty yards from the house, and remote from the drinking water. Some of his cases afford strong testimony for the contagionist, after the development of the zymosis in the neighborhood.

My friend, Dr. R. I. Hicks, of Casanova county, Va., writes me, "several years ago, I was called to attend some

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cases of typhoid fever, (I think five in a family of twelve had it.) Suspecting a local cause, search was made, when it was found that the cellar under the house was filled with dirty offensive water. This water was drained off and no other cases occurred." The doctor adds, "I have an abiding belief that in the majority of cases the cause is local and can be discovered if due diligence is used."

In this connection, I am informed that some years ago, this fever prevailed to an alarming extent on the river near us—above and below a mile down. So well satisfied were the citizens that the emanations from the *pond* were responsible for it, that they determined in a mass meeting to tear the dam down, and on meeting for this purpose, they ascertained that there was a large collection of excrementitious matter (including a dead hog), in or near the forebay, which being removed, and the place being cleansed, the fever subsided, without the sacrifice of the dam.

In February, of the present year, two cases of dysentery—one exceedingly severe—and two of diarrhœa occurred in my practice in one family, and at the same time, examination disclosed the facts that the drinking water was obtained from a new well, supplied entirely by surface water, and that the fowls roosted near the well, and their excrement falling in a depression a few feet from its mouth.

In response to the question, "can you recall any cases of typhoid fever originating under such circumstances as to exclude the probability of importation from some other locality?" propounded in a circular letter, addressed by Prof. Cabell to the members of the Medical Society of Virginia, fifty eight replied in the affirmative, and only twenty in the negative.

As evidence of contagion, Dr. Lazzell, of Fairmont, W. Va., in the *Transactions* of the Medical Society of that State for 1877, he gives the particulars of forty cases traced to a store pedlar, who coming from twenty miles distant, was attacked on reaching the neighborhood.

My friend, Dr. Geo. W. Hunton, of Warrenton, Va., informs me that before the war, he treated fifty cases of typhoid fever in Fauquier county, all resulting from one case brought

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home sick with the disease from a distant county. All of his cases occurred among the servants of a single farmer.

In the year 1855, when there was no typhoid fever in that portion of Culpeper county, Va., in which I reside, the wife of a patron went to a neighboring county to nurse her sister, ill with this disease, (of which she died in a few days,) carrying a little son with her. Within ten days or a fortnight after her return home, this lady and her little son were almost simultaneously attacked. Within a fortnight from this time, the remaining members of the white family, four in number, were seized, in a few days of each other. These patients were neither nursed, nor seen, by any person unprotected by a previous attack, and the outbreak was limited to this family.

In the fall of 1861, three families in which I was the medical attendant, two residing in Fauquier county three miles apart, and the other in Culpeper ten miles distant from either, received soldiers, sick with the typhoid fever, from the camp at Manassas, into their houses. In Fauquier, both white and black families were attacked, the number of cases aggregating forty, the cases traceable from patient to nurse, *generally*, but in some instances, a visit only, to the sick seems to have been sufficient. In the Culpeper family, but one case occurred—that a very severe one—in the white family.

My recollection is, that the fever did not extend beyond these families, embracing in Fauquier, the *quarters*, in one instance, two miles distant from the residence of the white family. It will be remembered that at the time of which I speak, there was very little neighborhood visiting by either race.

I will mention only one other instance in support of the doctrine of contagion or infection, based upon personal observation, and this because of its weight in support of the views which will be advocated under the head of sanitary management of the sick.

In January of last year (1882), I was requested to see a young man sick of this fever. He had been employed at a distant point on the Virginia Midland railroad, where the

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disease was prevailing. He was in the beginning of the third week of the disease, and undergoing treatment in a small room, with bad sanitary conditions, in which some six or seven young persons were collected, at the time of my visit. The result was that all of the younger members of the family—eight in number—were attacked, making an aggregate of nine cases in this family. Intercourse with the neighborhood having been cut off, the disease did not spread beyond this house.

A priori, the writer believes, that typhoid fever is contagious and infectious. He is also convinced that the poison is conveyed in drinking water exhalations from cess-pools, sewers, etc.; but whether the germ is generated *de novo*, in decomposing excrementitious and vegetable matters, or whether its presence is due to its remarkable viability, he does not know. In support of what he considers the great viability of this germ, one only of several similar sequences to the following will be mentioned.

In the beginning of the year 1856, this fever prevailed in a particular quarter on a neighboring farm. About the first of the next January—nearly a year having elapsed—and at a time when there was no fever in the neighborhood (and none in that from which he came), an overseer, with his family moved into this house. Within a fortnight, and following each other in quick succession several members of the family were attacked. My recollection is, that the house was uninhabited from the Spring of 1856 till January 1857, when it was occupied by the overseer, and sanitation had been entirely neglected—the inner walls even had not been whitewashed.

I will state in this connection, that in consequence of this and similar experiences, it has been my practice for a number of years to attempt the disinfection of rooms in which zymotic diseases have been treated. My plan is, to wash the floors, walls and ceilings with boiling water, which may be conveyed by means of a large mop, from a vessel kept at the boiling point; steam would be better. After the scalding, the walls are whitewashed. Since the adoption of this procedure, families, numbers of which were unpro-

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tected by a previous attack, have moved into houses and rooms, within a few days after being occupied by patients with this fever, scarlet fever and diphtheria, and have been treated in them; but I do not remember a single instance in which infection has resulted.

This mode of disinfection is predicated upon the hypothesis, that the germ, being an animal organism, while it does not succumb to the purging process, as some other animals do not, unless endowed with the endurance of the fabled Salamander, must yield to the temperature of 212° F. Upon this theory is based my views of disinfectants. While I know of none in general use capable of the destruction of these germs—as used—I am sure of their destruction if we get them into a fire by means of a properly directed draft—or into boiling water.

This brings us to treatment, and first *sanitary*. For myself, if practicable, I would select a large, high-pitched, well ventilated upper room, with open fire-place; I would strip it of carpet and curtains, have two bedsteads with bedding on—one only at a time. The body, linen and sheets should be removed at least once a day, and immediately immersed in boiling water, the patient's position in the room, to be changed from side to side every day, a fresh bed to be put on extra bedstead for the purpose, and the other taken out to be aired. The execreta should be removed as soon as discharged, and preferably burnt.

A remarkable illustration of the importance of change of position, with reference to room, came unde · my observation a few years since. A youth 17 years of age, was being treated in a room 18x22 feet, 10 feet pitch, in the third week. A fire was kept constantly burning in a large open fire-place, the windows and doors were kept alternately open, his bed was changed to the opposite side of the room once a day, shirt, drawers and sheets had been changed daily, but for the last twenty-four hours the relation of his bed to doors and windows had been such, that the drafts from these points to the fire did not impinge upon it. At the end of this time, his circulation became so rapid and feeble, with gasping respiration and cold extremities, which symptoms

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were progressive in spite of active stimulation, that a distinguished physician pronounced him in *articulo mortis* and advised that he be not farther persecuted with unavailing efforts to rally his failing vital forces. This youth was removed to a fresh bed near the middle of the room, in the line of draft from window to door, and the bed and bedding upon which he had lain, taken from the room. The result was that within half hour, the circulation and respiration had so much improved as to renew the hopes of my friend and self which had been abandoned so short a time before. This youth made a satisfactory recovery.

Per Contra,—I was requested to see four patients in consultation, laboring under a zymotic disease in a neighboring county. I found them all crowded in a room 14x16 with 7½ feet pitch, windows down and doors closed. A fifth patient had died in the same room the preceding night. The bedding and body clothing from its appearance, had probably not been changed since the outbreak of the disease. The result was that all except one succumbed to the poison, which by constant evolution was almost palpable. This one, wonderful to relate, lived a few weeks to die of a sequela.

In the treatment of diseases of this class, the physician who realizes most fully the secondary position which he holds, to the great doctor, nature—that she is capable of eliminating a poison for which he has no antidote—will, *cœteris paribus*, be rewarded by the largest measure of success.

Assumed, then, that she will eliminate the poison in a given time—two factors—the one a *sine qua non*—and the other of great importance, may be noticed. The first is to keep the machine in motion; and the second is to prevent repoisoning. Among the earlier indications we have to meet, are cephalalgia and hyperpyrexia. As a single remedy gelseminum has disappointed my expectations less often in controlling the first.

I confess a limited experience with the acknowledged medicinal antipyretics, among which quinia and salicylic acid hold the front rank; but I occasionally obtained satisfactory results from both. The antipyretics, however, *par*

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excellence, are cool, or cold water and air, and alcohol. Another antipyretic measure which long use has made me partial to: —It is the enbrocation of the surface with old bacon rind, generally, but vasaline preferably, for the squeamishly neat. Diarrhœa usually yields to the chlorinated tincture of iron, which has the additional advantage of a blood tonic. If tympanites is troublesome, strychnia is added. Sometimes it becomes necessary to restrain this complication per rectum. Then, I usually give the preference to the acetate of lead and tincture of opium. Under special conditions, the oil of turpentine is almost indispensable. As a hæmostatic, I would give the preference to ergot, hypodermically when hemmorrhage is sudden and alarming

I regard alcohol in some one of its forms—generally, good rye whiskey—as a *sine qua non*, in many cases. In it, we have a food requiring no digestion, a stimulant and antipyretic. When the stomach is non-retentive, its hypodermic application gives good results. For insomnia, chloral hydrat combined with bromide of potash frequently secures better results than opium.

As a heart tonic, digitalis exerts considerable power in the later stage.

Alimentation is a matter doubtless of prime importance, requiring the exercise of our best judgment and most watchful care for its proper regulation. Some of us have seen a stomach, the digestive power of which was almost *nil*, under the poison of disease, crowded with a medley of nutrition, stimulation and medication, *ad nauseam*. In its rebound from the *absolute* diet of the olden authorities, there is reason to fear that the pendulum has swung too far in the opposite direction.

Dr. Wm. Pepper, in his address, read before the American Medical Association, in 1881, says in reference to the plan of alimentation so fashionable a few years ago, "It is not to be wondered at, that the exhausted nervous system, should be paralyzed by the intense reflex irritation from the inflamed mucous membrane, aided by the poisoning of the blood, which must certainly have been increased by filling the intestines with organic matter that could not be digested,

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but must have petrified and furnished the most fertile soil for the continued development of fresh specific typhoid poison."

In our attempts, then, at alimentation, we must ascertain the digestive capacity of our patient and not exceed it.

The writer would object to treating two or more patients for a zymotic disease in the same room at the same time, because of what he regards a well founded fear of re-infection. To illustrate. A distinguished physician of Baltimore, Md., recently detailed the following facts: He was treating two cases of scarlatina—children of wealthy parents—in the same room. The one was convalescent, having nearly completed the stage of desquamation, his attention and that of a consulting physician being given to the other child in an earlier stage. Accidentally attention was directed to the convalescent, when it was discovered that he had all the symptoms of the primary stage—including the rash. Both children died, the one of the primary, and the other of the secondary attack. May not what are called relapses in the zymoses be generally traced to re-infection, due to unsanitary conditions.

In concluding a paper already too long, allow me to insist upon the importance of *isolation* of the patient, and the limitation of attendants to the protected, as a factor of the first importance in limiting, *or burning and scalding out* the pabulum upon which the zymoses feed. The writer has more than once seen—as he believes—typhoid fever, scarlatina, and diphtheria limited to a single case, by the observance of these precautions, even when the patient has been occupying the same bed with the unprotected for several days after seizure.

To Cover Odor of Iodoform.—Dr. Putz, of Graefrath, has tried all the recommended means for covering the odor of iodoform, and confines himself now exclusively to oil of mirbane and nitrobenzol, all the others having failed in his hands. Six drops of nitrobenzol are used for every gram of iodoform.—*Pharm. Zeit., and New Remedies.*

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Clinical Reports.

A Case of Diseased Breast Occurring in Private Practice. By JOSEPH H WARREN, A. M., M. D., Attending Physician to Massachusetts Home for Intemperate Women, etc., Boston, Mass.

Miss E., age 26, in April, 1881, slipped while descending stairs and fell some distance, striking upon the fourth and fifth lumbar and the seventh, eighth and ninth dorsal vertebræ. This injury was followed by partial paralysis of the lower extremities and incontinence of urine. There was considerable swelling, inflammation and ecchymosis of the back, while the pain was neuralgic in type and most excruciating in nature. The patient was unable to lie upon her back for upwards of three weeks. The treatment was rest and very little medication, besides opiates for the pain, nux vomica and quinine for their tonic effects. She slowly recovered, and in the latter part of May was able to go to her home in Maine, and was able to take exercise in the open air, enjoy her food and rest well at night. This apparent enjoyment of good health lasted, however, only a few weeks, when severe sciatic pains in both thighs made their appearance. This pain was so depressing, that in the latter part of June she was obliged to take to her bed.

Soon after this, she began to vomit and to feel after each act the most intense pain in her back, at the seat of her former injury. She was able to retain only the smallest amount of the most bland and liquid food. This condition continued, with slight improvements and relapses, until the latter part of July, when the pain, as well as the nausea and vomiting, became so constant that she could retain nothing whatever upon the stomach. Life was sustained by enemata of beef tea and other nutrient materials. This treatment had been continued eight or ten days when I saw her in the latter part of August in consultation with Drs. Hale and Haggerty, of Sedgwick, Maine.

About a year and a half previous to the injury, the patient had noticed a small tumor at the side of the right breast, which extended in a semi-circle around the areola and nipple. This she most secretly kept to herself and avoided speaking of it to any one. As the breast was rather small, I should say the tumor represented about one-third of the whole size of the breast. The nipple was retracted to the level of the superficial walls of the chest, and the tissue over the promi-

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nence of the tumor had broken down, yielding a slight discharge. The lymphatics had become involved, and the axillary glands were developed to the size of horse chestnuts. Both this and the breast were extremely tender and painful.

The attending physicians had been in doubt whether the case was typhoid fever, gastritis, or whether what was supposed to be a cancerous growth had become so disseminated through the system as to have attacked the pyloric orifice. At the time I was called in consultation, the latter was the theory the physician held. The temperature was only slightly above normal, but the pulse was rapid and feeble. The patient seemed very much prostrated and unable to stand the strain many hours, or days at least. She retained her consciousness perfectly, except when under the full influence of hypodermic injections of morphia.

The question in our consultation now arose:—Does this vomiting proceed from simple gastritis, or from cancerous infiltration? The other physicians took the latter view, while I maintained the opinion that the nausea and vomiting was reflex, and was the result of the injury to the spine. If my theory were correct. I inferred that etherization would arrest the vomiting. This we tried.

When she was fully under the ether, we decided to remove the breast, because of its depressing influence upon the spirits and the system generally. This I performed by making the usual elliptical incision. The enlarged axillary gland was removed at the same time. Hæmorrhage from the inframammary artery was controlled so perfectly by using traction before I severed the vessel, that not a-half ounce of blood was lost during the whole operation. The edges were brought together and secured by silver sutures, and the wound healed by first intention for the greater part of its extent. At the outer boundary of the opening, I inserted a small drainage tube from fear of suppuration from the axillary region.

After the withdrawal of the drainage tube, that portion of the wound did not heal for several weeks, when it finally completely healed by granulation and suppuration.

Upon the return of consciousness, after etherization, the nausea and vomiting had entirely disappeared. Food and stimulants were so well borne and assimilated, that by the early part of October, she was able to take exercise in the open air.

About this time, while in good convalescence, she fell from a reclining chair and again injured her back. The old

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pain, with all the nausea and vomiting, returned. The latter part of December, her physician again consulted me, and I again recommended etherization. This gave perfect relief from vomiting, as it did in the first instance; and the case is interesting as illustrating, the reflex origin of the vomiting arising probably through the tract of the sympathetic nerve from the injury to the spinal column. Antiseptic precaution was taken by atomizing acid carbolic spray into the apartments while operating and using dressings of cotton wet in solutions of thymol.

The breast remained sound, without any apparent return of its diseased condition. Under microscopical examination, the removed breast was cancerous in appearrnce.

Proceedings of Societies.

Proceedings of the College of Physicians of Philadelphia.

[*Dr. J. Ewing Mears, Secretary.*]

March 7th, 1883. Dr. Walter F. Atlee reported the **History of a Case of Abdominal Cystic Tumor, where Seven Years after Removal of the Tumor by Laparotomy a Second Operation was Demanded:—Tapping through the Vagina Resorted to, with Consequent Death of the Patient.** In June, 1875, I removed, by laparotomy, in the St. Luke Hospital, Bethlehem, a multilocular cyst from Mrs. DeM——. The history of the case was given by Dr. Stout to the Board of Trustees, and published in their second Annual Report. The whole mass removed at the operation weighed seventy-eight and a-half pounds. The lobes and lobules composing it were made up of cysts containing fluids of different densities, colors, and other physical properties. The pedicle appeared to arise from the rectum; at all events, the cyst wall was separated from everything else, except the front of that intestine, and the only ligature used was there applied. The whole vascular supply was derived from meso-rectal vessels. Of course, the clamp could not be used. As always, in sewing up the incision in the abdominal walls, I carefully included the peritoneum in the sutures, as in this way adhesions of intestine and omentum, with the consequent discomfort and constipation suffered by the patient, are never observed; and, moreover, in case a second ovariotomy should have to be performed, the operation could be performed with much more ease and safety.

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This patient recovered from the operation, though somewhat slowly, owing to delay and difficulty in removing the ligature, which was left hanging out of the external wound, and not cut short and left inside the abdomen, as is now generally practised. She remained in perfect health for seven years, but in the summer of 1882 came to my office complaining of considerable discomfort in the pelvis, where I detected, by the touch, the presence of a swelling, caused by a thick, viscid fluid; in other words, there was plainly a second tumor formed there. This continued to enlarge, and in the month of January, the suffering it occasioned was so immediately threatening to the patient's life, that it was necessary to act. Great efforts were made to push the tumor out of the pelvis, but this was not to be accomplished. It remained to operate as before, and remove the mass by laparotomy, or to give relief by emptying the cyst by tapping through the vagina. The latter procedure was preferred, and about three pints of a very thick, dark-colored fluid were drawn off by a Thompson trocar. There was no difficulty about the operation, nor was it attended by any particular pain, nor was there any hæmorrhage. The next day the patient felt herself completely relieved, but after that her pulse became quickened, and a general febrile condition, unpreceded by a chill, succeeded. There was evident tenderness on pressure over the lower part of the abdomen, but no severe pain independent of this pressure. The stomach became so irritable as to reject everything swallowed. Death took place on the eighth day, under the marked symptoms of depression which accompany pyæmia. It was a death, most plainly, from cyst inflammation.

Notwithstanding the great number of cases of operation for ovarian disease reported nowadays in journals, more or less medical, this case is really one deserving of record, and one of true and special interest to the pathologist and to the surgeon.

In removing the large mass in the first operation, in this case, it was noticed that no pedicle was found. It was separable by the fingers everywhere except from the front of the rectum, where it was necessary to apply a ligature and divide the attachment by scissors. The ovaries, as we all know, are situated in the posterior fold of the broad ligaments, on the sides of the highest part of the uterus, behind the Fallopian tubes and the round ligaments, which separate them from the bladder, and in front of the rectum, from which they are commonly separated by the lowest circumvolutions

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of the ileum. By a rounded cord—the ligament of the avary —they are attached internally to the womb, and externally by two folds of the peritoneum to the sides of the pelvis.

As the ovary, in its normal condition, is not pediculated, at first, of course, a diseased ovary has no true pedicle. As it becomes larger, this pedicle is formed from changes in its normal connections with the adjacent womb; it consists of the Fallopian tube often much elongated, the broad ligament often considerably thickened, the utero-ovarian ligament occasionally hypertrophied to a large fibroid stem, the round ligament, and enlarged blood-vessels. If the tumor rises out of the pelvis the pedicle will be longer, and if bound down in the pelvis from early adhesions, it will be shorter.

In some cases, however, and they are by no means rare ones, when cystic tumors are removed from the abdominal cavity, no such pedicle as the one just described is met with. In the case, whose history I have been relating, it was said that there was no distinct pedicle, and that the whole vascular supply came from the vessels of the meso-rectum. It may naturally be supposed that this was owing to the way in which the diseased mass may have been separated from its surroundings, and I therefore call attention to the fact that the same thing has occurred in the practice of an operator such as Spencer Wells. In his *Diseases of the Ovaries*, in relating Case CX., he says that he found no pedicle, and that the tumor derived its vascular supply from the omental and mesenteric vessels.

It seems to me most reasonable to look upon some of the abdominal tumors having these connections, not as enlarged and diseased ovaries, but as changed ovules, which have failed to enter the Fallopian tubes, have slipped in the interstices of the neighboring organs, become attached, received blood, and grown. In women, when the Fallopian tube has become adherent, in place of floating loosely, the ovule is not grasped as it leaves the ovary, and then it is not rare to see ten, fifteen, twenty, or even more small cysts, some as large as a pea, on the parts immediately in contact with the ovary. (See Sappey, vol. iii., p. 644.)

If one of these misplaced ovules was attached to a spot, where plenty of blood was supplied, a large cyst could be formed, having no distinct pedicle, as in the case before us. As is seen in cases of extra-uterine fœtation, a well-made child can be formed in this way from a fecundated ovule, and we may suppose that from an unfecundated one a monstrous polycystic growth should form.

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Although out of the way, I wish to mention here that the only two cases in which I have been consulted on account of a return of abdominal cystic tumors, were where there was no pedicle, and where the chief vascular supply came from the vessels in front of the rectum. One case is the one now under consideration, and the other is the one published in the *American Journal of the Medical Sciences* for January, 1883, on account of the bladder having been opened during the operation.

My reason for reporting this case, however, is not to advance any particular views in regard to the pathology of certain polycystic tumors of the abdominal cavity, but in order to speak of the mistake made in the treatment. In the words of one who has done as much as any other to advance our knowledge of the treatment of abdominal tumors, "Mistakes teach most valuable lessons, and, when discovered, are not likely to be repeated. Hence, in medicine, they should be recorded for the benefit of science and of humanity." (*General and Differential Diagnosis of Ovarian Tumors*, by Washington L. Atlee, in Preface.) When this case presented itself, it was necessary to act; a speedy and most painful death was inevitable unless relief were afforded. It remained to choose between the removal of the cyst and the emptying of its contents by tapping through the vagina, the only way practicable of introducing a trocar. On account of the operation previously performed, and the impossibility of moving the mass in the pelvis, its removal was not attempted. A previous operation is not necessarily an objection; Dr. Washington L. Atlee records two cases where a second operation was performed, and in both successfully. Spencer Wells, in his table, gives thirteen cases in which he removed an abdominal tumor from a patient who had previously undergone the operation, and eleven of them were successful. Here, however, the immovability of the tumor was such as to make me positively sure that the attachments were so great as to render its removal impossible.

Of tapping through the vagina I had no personal experience whatever, and what is recorded by others, although not, as a general rule, favorable to the plan, did not deter me from it. Scanzoni goes so far as to say that if puncture by the vagina was always possible, abdominal puncture would soon completely disappear from surgical practice. The sac, opened in its lowest part, can empty itself more completely. (Scanzoni, *Traité pratique des Maladies des Organes sexuels de la Femme*, Paris, 1858.) Peaslee says that there are three

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considerations to deter us from it in all ordinary circumstances: 1st. The vessels are larger and more numerous at the lowest part of the tumor; 2d. If polycystic, the largest cysts are not at its lowest part; and 3d. There is greater risk of wounding other organs. (Peaslee, *Ovarian Tumors, their Pathology, Diagnosis, and Treatment, especially by Ovariotomy*, 1872.)

Emmet writes that he has punctured several cysts with a trocar from the vagina, and in every instance more or lees cellulitis has resulted. This might, however, destroy the cysts, but he is not able to determine that, for all the cases passed from under his observation. (Emmet, *Principles and Practice of Gynæcology*, 1880.)

Thomas says that by this method two of the dangers of tapping, secondary escape of fluid into the peritoneum, and consequent peritonitis, are unquestionably avoided; but others are as surely increased, namely, those of injury to portions of the intestine and entrance of air into the sac, with consequent decomposition of the contents, septicæmia, and inflammation of the sac walls. His experience with the method is not large, but it leads him to agree with Spencer Wells. (Thomas, *Diseases of Women*, 1872.)

Spencer Wells says that tapping through the vagina is more liable to be followed by inflammation of the cyst than tapping through the abdominal wall, because it is not easy to prevent the entrance of air. The operation of tapping through the vagina is selected, not so much with the intention of simply emptying the cyst, as for the chance that should the fluid escape by the opening, as fast as it is secreted, the cyst may gradually contract, and the puncture close. This favorable result, however, is seldom secured. As a rule, air enters the cyst, the opening fills up—the fluid remaining in the cyst—or that newly secreted putrifies. Suppurative inflammation of the lining membrane of the cyst comes on, and is accompanied by a low form of septic fever or pyæmia, which can only be relieved by making and maintaining a free outlet for the discharge. The frequency of these consequences should make tapping by the vagina an exceptionable practice; but it may be adopted in cases where an ovarian cyst is bound down in the pelvis by adhesions, and it is necessary to relieve the distress caused by pressure on the bladder and rectum.

The canula or an elastic catheter may be left in the cyst, though it is safer practice either to introduce a wire seton or a drainage-tube, so as to prevent the opening from closing,

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and make sure of the free and immediate escape of any fluid that may be secreted. Even with every care, however, Mr. Wells concludes, from his experience, that patients are so apt to suffer from some of the ill effects of long-continued suppurative processes, that it is better, even at considerable risk, to remove a cyst, if at all possible, than to trust to any mode of drainage. (Spencer Wells, *On Ovarian and Uterine Tumors, their Diagnosis and Treatment*, 1882.)

Dr. Charles West, whose opinions have for me, at least, extraordinary importance, greater indeed on such a point than those of any other man, says that there is no doubt but that inflammation attacking parts within the pelvic cavity is less apt to extend to the peritoneum than when it atttacks an abdominal organ; of which rule pelvic cellulitis and inflammation of parts within the folds of the broad ligaments are apt illustrations. It is equally incontestible that pelvic peritonitis is less apt to become generalized than is similar mischief originating in the abdomen. Cyst inflammation is so dangerous, however, that it is doubtful if vaginal tapping may be employed, even when the cyst is simple. Its dangers are incalculable. The dangers of ovariotomy are far less. Except when a cyst is impacted in the pelvic cavity, he does not recommend tapping per vaginam. (West, *Lectures on Diseases of Women*, 1879.)

Our best authorities, therefore, teach us that the tapping of polycystic tumors at least must be avoided; that the removal of the cyst is to be practised in preference; that when impacted in the pelvis, so that it interferes with the performance of functions absolutely necessary to life, tapping, to which we must have recourse, is particularly dangerous, owing to the frequency of cystic inflammation and consequent death from septicæmia. In my case I thought to avoid this by taking precautions to hinder the entrance of air into the cyst, but it took place notwithstanding, and the death of the patient was occasioned by it in eight days.

If, unhappily, I should ever again be called upon to try to relieve a similar case, I should act differently, and not relying upon any means to prevent the setting up of cystic inflammation, do more to establish a free outlet for the noxious products by which the system is poisoned, and do everything in my power to prevent their formation by topical applications to the secreting surfaces of the cyst.

Dr. Noeggerath (*Ovariocentesis Vaginalis, American Journal of Obstetrics*, May, 1869), by pursuing this course, had such good results as to declare himself confident that, where

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a simple or compound cyst could be attacked through the posterior vaginal cul-de-sac, this operation would take the place of laparotomy. The plan he prefers is to make first a transverse incision, about an inch long, behind the cervix uteri and through the roof of the vagina up to the cyst. This, coming into view, is then evacuated by a free incision, and, finally, the edges of the two incisions are stitched together by five or six silver sutures. The cyst thus left free and permanently open is daily washed out with antiseptic injections until it finally contracts, and ceases to afford any secretion. Although, at the present time, it is not likely that in ordinary cases any one would choose to perform this operation to that of the removal of the cyst, yet all experience shows that when the cyst is so firmly fixed in the pelvis as not to be removable, it diminishes in a marked degree the great danger necessarily incurred by tapping through the vagina—that of poisoning of the system by the absorption of the putrid products of cystic inflammation.

I feel cetain myself that I made a sad mistake in not operating in this way; and report this case as a warning to others —*Bene facit qui ex erroribus aliorum, sibi exemplum sumat.*

After the reading of the preceding paper:—

Dr. William Goodell said that he did not think the attachment of the tumor to the rectum was so unique as the return of the tumor. He had on several occasions removed tumors without being able to find the true pedicle, on account of the many adhesions. He could not agree with Dr. Atlee with regard to the origin of the cyst—he did not think it could have come from a wandering ovum, since, in that case it would have been monocystic.

He regarded tapping per vaginam hazardous, for the reasons given by the late Dr. Peaslee, first, on account of the danger of wounding blood-vessels, and second, on account of the danger arising from the entrance of air into the cyst. He did not understand why the air could enter the cyst so readily after tapping per vaginam. When he performed tapping by this method, he employed the aspirator. Returning to the question of the attachment apparently of the pedicle to the rectum, in the case reported, he said that it was quite common not to find a pedicle in some forms of intraligamentous cyst, because they had to be enucleated, and referred to the statements of Lawson Tait with regard to this difficulty of determining the origin of the tumor. He desired to call attention to the pathological characters of the

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recurrent growths, and stated that according to his observation they were always malignant, and that they recur in the stump of the pedicle, or, as he had seen, at the site of the adhesions. He alluded to a case which occurred in his own practice, and to one related to him by Dr. Bantock, of London, which confirmed the statements made.

He asked Dr. Atlee whether he could explain why the air entered so readily into cysts after tapping per vaginam.

Dr. Atlee, in reply, said that he had seen no reason given, but thought it was owing to the difficulty in closing the wound made in the tapping.

Dr. R. P. Harris remarked that perhaps he could throw some light upon the cause of this admission of air, from what he had observed in a case of removal of hæmorrhoids. Some years ago, soon after the introduction of the écraseur of Chassaignac, he called in the late Dr. Joseph Pancoast, who had obtained the instrument, to make use of it in removing a mass of hæmorrhoids from the rectum of a very anæmic man, rendered such by repeated hæmorrhages after defecation. After the operation, to prevent, as he stated, the suction power of the diaphragm upon the rectum, endangering secondary hæmorrhage, Dr. Pancoast introduced into the anus a small box-wood tube. The effect of this was soon demonstrated; a large drop of serous fluid descended the tube and stopped at its exit; when the diaphragm arose in expiration, the drop was drawn up the tube, and when it descended in inspiration, it came down again—thus showing the pumping effect of the diaphragm upon the pelvic contents. Let this open tube become an opened cyst with flaccid walls, and we have air pumped into the cyst, as it was into the rectum of our patient.

Dr. J. Ewing Mears asked Dr. Atlee whether a *post-mortem* examination had been made. He thought the observations of Dr. Goodell with regard to the difficulty of finding the true pedicle in tumors with many adhesions, and to the pathological characters of the recurring tumor in these cases to be correct, as such had been his experience in instances of which he had had personal knowledge. With regard to the entrance of air into the cyst, when tapping is performed per vaginam, he thought the explanations of Drs. Atlee and Harris were correct. A cyst firmly impacted in the pelvic cavity is separated from the vaginal tube by a comparatively thin septum, differing greatly in its anatomical characters from the abdominal wall. The opening made by the trocar in

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this septum and in the cyst wall attached to it by adhesions, does not close perfectly, and the air drawn up into the vaginal tube passes readily into the collapsed cyst.

Dr. Atlee, in reply to Dr. Mears, stated that no *post-mortem* examination had been made.

Medical and Surgical Society of Baltimore.

The 451st regular meeting was called to order by Dr. Rohé, Vice-President. Drs Percival, Reed, Chambers and Lynch related cases, after which Dr. Caldwell's eloquent paper on **Vaccination** was read by Dr. Cuddy, and discussed by Drs. Morris, Lynch, Evans, Hill, Reid, Taylor and Rohe. Dr. Caldwell says, by way of introduction, that vaccination should be performed at least once every year during life, preferably in fall or winter, for then the virus has the greatest vitality, and smallpox is more prevalent. Since the memorable career of the renowned Jenner and Pasteur, the mortality from smallpox has narrowed from 50 to 70 per cent. down to from 7 to 10 per cent. With the introduction of bovine virus foolish ideas, such as the following, became greatly dominant, viz:

1st. That vaccination was apt to entail certain hereditary diseases.

2nd. Once vaccinated, always vaccinated.

3rd. Seven years immunity from each vaccination.

4th. Peculiarities and idiosyncracies of different individuals.

5th. Unilateral vaccination.

Vaccination should be performed on both arms at the same time, and so often thereafter on different portions of the body, until it takes no longer. Again; the fallacy of body change only once in every seven years cannot for a moment bear consideration from the physiologist, who knows that the body is under continual morphological changes; old forms giving away to new changes. During epidemics of smallpox, universal vaccination should be resorted to, by means of which smallpox will be modified—the two (vaccine and smallpox) running in parallel progress. He then proceeded to give the history of Jenner and his discovery, in which he remarked that Jenner was yet sufficiently young to recollect the severity of discipline submitted to by himself in the practice of inoculation, which, to use his own words, was to bleed until the blood was thin, purge until the body

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was wasted, and starve on vegetable diet to keep it so. Lord Bacon has said that it is heaven on earth to have man's mind moved to charity, rest in providence and turn upon the poles of truth. Jenner is a striking illustration of this remark. Rewards and memoirs were sent him from every quarter of the globe, and his name will be prominent so long as mankind exists.

In closing, Dr. Caldwell made honorable mention of Pasteur, of Paris, who for the last twenty-five years has made a martyr of himself to further the vaccine principle.

Dr. Norris thinks with Dr. Caldwell that vaccination should be performed on both arms, and should be repeated often; that cowpox is smallpox modified, to which individuals display a greater susceptibility during an epidemic of smallpox.

Dr. Lynch can testify to the last statement of Dr. Norris as to the susceptibility to vaccinia during epidemics of smallpox, which is either attributable to constitutional peculiarity, vitiated atmosphere, or uncommonly good virus, obtainable at that time. Of late, 90 per cent. of his cases of vaccination were successful, whereas heretofore the contrary was the rule; nor had he seen such very sore arms (fungoid in character) as attracted the attention of the profession last year as regards multiple sores. He had successfully vaccinated Bohemians and Germans who had from four to six good scars at the time of vaccination. He believes that after all the plan advocated by the late Dr. N. R. Smith, that is, to vaccinate and re-vaccinate until vaccination will no longer take, is advisable; and life-long immunity against smallpox in consequence of the repeated vaccination (even though in early childhood) as claimed by its author, is highly plausible.

Dr. Evans thinks that we will again resort to the old method of using scabs in preference to bovine virus, the purity of the latter of which there is no certainty; whilst the former can be selected by the physician himself with the satisfaction of knowing its source; that the person vaccinated should be seen on about the eighth day and re-vaccinated, provided the first should not have taken. One point of insertion produces cowpox; two or more does the same, hence the latter is unnecessary. Smallpox may take place even though the patient presents a good cicatrix, said patient being again susceptible to vaccination at this time.

Dr. Wm. N. Hill called attention to the smooth, non-punctated scar, which he deems not protective against small-pox, a good scar presenting the appearance of a pepper-box top.

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Considers vaccination from the scab safer, quicker, more protective, and more rapid in maturing.

Dr. Reid can substantiate what has been said by the former gentlemen, and believes that the last epidemic of pink eye among horses was allied to smallpox.

Dr. Rohé is in favor of humanized virus, from which he has had the best results, and believes in repeated vaccination. He referred to the smallpox expidemic of 1872, which he thinks was so quickly stamped out, owing to the duty of the Vaccine Physician to again visit the vaccinated person at the end of three weeks, to re-vaccinate, provided the first had not taken, and report every case with results.

Dr. Evans attributes, in a great measure, the spread of our present epidemic to the action of our authorities in displaying a yellow flag from houses where smallpox exists. He knew of a number of cases where the physician was not sent for, the family fearing that a flag would be displayed, the working members of the family discharged in consequence, and starvation stare them in the face.

The 452nd regular meeting of the Medical and Surgical Society of Baltimore was called to order by Dr. Rohé, Vice-President, December 20th, 1882. Minutes of last meeting were read and approved. Cases were related by Drs. C. T. Percival and J. W. Chambers, after which Dr. C. F. Bevan read his paper on

Lithotomy, with Cases, of which the following is an extract, and which was discussed by Drs. Monmonier and Reid.

Case I.—B. C. L., æt. 17, a native of the southern shore of Maryland, consulted me September 18, 1882, for an affection of the bladder, which was of long standing. The patient, who had been a bottle-fed baby, had an attack of hæmaturia when only two years of age, which lasted nearly one year. When about five years old, he was seized suddenly with severe pain in the right lumbar region, which in a day or so was associated with bloody urine. Until his tenth year was reached, at intervals of three or four weeks, he would have attacks of lumbar pain, very severe with hæmaturia. He seemed to outgrow this condition, and his physical development was rapid up to his sixteenth year, at which time he began to complain of difficulty in passing his water, of pain in the glans penis and perineum, hæmaturia at times, especially on exertions of walking or riding, and of stoppages in the flow when urinating. Examination with a sound gave the clear, sharp, and audible *click* of stone: the lithometer

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showed the stone to be about one inch in its long diameter. Left lateral lithotomy was performed on September 25th, 1882, using the instrument introduced by the "*Emporer*," and a mulberry calculus one and one-fourth inch in length, three-fourths inch thick; weighing 160 grains (when first removed), was successfully removed. *September 27th*, 1882.—Temperature, 103°; pulse, 130; wound looking well. A malarial complication tended to keep up his temperature and retard convalescence some days. *October 7th.*—Passed all of his urine *per vias naturales* in the morning; a slight amount through the wound at night. *October 11th.*—All passed through natural channel, and whilst the wound had not yet finished granulating, at the father's request (he being a medical man) the patient was discharged. He has since entirely recovered.

Case II.—J. D., æt. 20, a native of England, but for the last ten years a resident of the mining district of Pennsylvania, was admitted to the City Hospital October 31, 1882. His illness dated from the 19th August, 1881, at which time he slipped a sulphur match into his urethra so far that it passed beyond his control. The efforts which he made to remove it, as well as those made by others, tended rather to push the match backwards until the bladder was reached. An attack of cystitis followed, and in a short time he began to experience pain, difficulty in urinating, stoppages in the stream, streaks of blood, and, at times, free blood in the urine, together with a cloudy and sedimentous state of his renal excretion. He claimed, contrary to the rule, that he was obliged to urinate more frequently at night, or when lying down than at other times; that the tenesmus was not lessened by urinating, but was constant. Examination with the sound located the calculus at the neck of the bladder, and always at the same place, even though during the examination he changed his position. The lithometer gave the indications of a large stone, but owing to the pain complained of, its size was not determined. Left lateral lithotomy (Smith's instrument being used) was performed on *November 4th* 188-, and a large phosphatic calculus was removed. The calculus had the match as its nucleus, was two and three-fourths inches in length, one and one-fourth inch thick and weighed 1,000 grains when first removed. It was found lying at the neck of the bladder, with its long axis parallel to the vertical diameter of the bladder, so that it was not as easily grasped as usual, though it had not the character of being encysted. *November 5th.*—Temperature in morning,

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102.5°; pulse, 96. Evening—temperature, 102.6°; pulse, 104. *November 6th*—Temperature, 100.7°; pulse, 96. Evening—temperature, 103°; pulse, 112. The entire tract of the wound covered with a phosphatic incrustation. The patient was at once placed upon five-grain doses of benzoic acid every three hours, with the result of altering the character of the urine. *November 12th.*—Temperature 98.8°; pulse, 80. Wound clean and beginning to granulate *November 16th.*—First passed all urine, *per viæ naturales.* Temperature 100. A slight chill ushered in a mild attack of urethral fever, which increased slowly to November 20th, at which time his temperature reached 103°, pulse 108. Granulation progressed rapidly. *December 2nd.*—Patient up and about, in good condition, ready to be discharged.

Case III.—O. W., æt. 62, a native of this country and a shoemaker by occupation, consulted me May 2nd, 1877, complaining of difficulty in voiding his urine, pain in pelvis, and, at times, his urine was bloody. He stated that he had upon two occasions passed small pieces of gravel, ten years prior to his visit, and that his present symptoms were of two or three years duration. Upon examination with the sound, the audible and sharp click of a calculus was discovered. After some two weeks of preliminary treatment directed especially towards relieving the cystitis of which he complained, he was subjected to operation. Lithotrity was selected and performed May 19th, 1877. The stone was caught and crushed several times, the sitting lasting five minutes. The calculus (uric acid) broke readily. *May 20th.*—Had sharp chill; temperature, 104.2°; pulse, 130; passed considerable debris with each act of urination, and complained of the severe pain produced by some of the sharp fragments traversing the urethra. *May 21st.*—Temperature, 103°; pulse, 125. No appetite and very feeble. *May 22nd.*—Temperature 100°; condition better, fragments of stone still coming away, though not in same amount as during the first two days. *May 26th.*—Other fragments detected with the sound; the lithotrite again used in a sitting of seven minutes. The following day many fragments were voided, and again his condition became alarming. His temperature reached 105°; pulse, 140; weak and feeble, vomiting and complaining of the intolerable pain of bladder and pelvis. In three or four days the temperature diminished somewhat, so that on June 2nd it was 98.8°; pulse, 100. No fragments had passed during the last forty-eight hours. *June 4th.*—The sound detected a large piece of the calculus, and the third and last crushing was accordingly

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done, lasting three minutes. *June 5th.*—Passed fragments of debris, but the old difficulty returned, his temperature reading 103.5°, pulse 126. Vomiting, pain about bladder, and great depression. Was discharged finally as cured July 15, 1877. Has been re-examined several times since without detecting any of the old trouble.

Dr. Bevan acknowledged his indebtedness to Dr. Chambers for the following case of litholopaxy, for the purpose of contrast:

Mr. C——, æt. 53, came to the City Hospital October 3d, 1882, suffering from stone in the bladder. His trouble dated back to March, 1882. On examination a stone was found, believed to be phosphatic in character, kidney-shaped, one inch long, one-half inch thick. *October 16th.*—Patient was etherized and the stone crushed with the Bigelow instrument without difficulty in fifteen minutes. The evacuators of Bigelow were then used, and in thirty-five minutes more, 115 grains of debris was removed. The patient was then placed in bed and given ten grains of quinine with one-fourth grain of morphine. Four hours after operation, he passed one fourth pint of bloody urine, had a sharp chill, followed by temperature, 103; pulse, 100. *November 16th.*—Temperature, 100°; pulse, 90; feels well; passed water four times during first twenty-four hours. Up to the sixth day his condition remained about normal; he then passed per urethra a clot of blood, which was followed by a chill; temperature, 103°; pulse, 100. Seventh day, normal pulse and temperature. Eighth day, normal pulse and temperature; good appetite; urine clear and acid in reaction. Ninth day, took a ride in omnibus, and resumed his work as stone-cutter on tenth day, feeling strong and perfectly well.

Dr. Bevan then considered the relative merits of lithotrity by the old and new method *versus* lithotomy, reverting to history (old) on the removal of calculus. Celsus speaks of the method of the Augustan age as "cutting on the gripe." Hippocrates was evidently thoroughly acquainted, however, with the operation, and looked upon it as beneath the dignity of his followers, whom he required to swear never to practise it, but would allow it to remain where it was, in the hands of certain itinerant performers. As first practised, the operator introduced two or three fingers into the rectum, pushed the stone down upon the perineum, and cut down upon it, making a semi-lunar incision. This was practised as late as the 17th century. In the early part of the 16th century, a median operation called the "Marian method or

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apparatus major" was introduced. A vertical incision was made by the side of the raphé, and the urethra was opened on a staff at about the membranous portion. Dilators were thrust into the wound, and the canal and neck of the bladder were torn asunder with violence. At this time the high pubic, and possibly the operation of the famous Frere Jacques came forward, which latter was further modified during the 18th century by Cheseldon, the distinguished surgeon of St. Thomas Hospital. He performed the lateral operation almost exactly as it is performed to-day In 1822, Civiale became renowned in connection with the operation of lithotrity. At the same time Leroy D'Etiolles and others. Improved by various surgeons and mechanics, the operation of lithotrity received its crowning glory in 1878 through the labors of Bigelow, and we of to day have the honors which belong to the greatest surgical achievement of the age, viz: litholopaxy, or rapid crushing of the stone with the removal of the debris at one sitting.

To sum up briefly the balance of Dr. Bevan's lengthy paper on this subject, the main is: He says that in making a comparison between the several methods of operating, statistics, generally so valuable, cannot be relied upon, since the cases of lithotrity have been specially selected, and others not suited to the crushing method, such as multiple calculi, cases complicated with diseases of the bladder, kidneys, prostrate or urethra. In either of the last-mentioned conditions lithotomy should be done, as also in the very young or old, or where the urethra is of small calibre. It is best to crush all calculi under one inch in diameter; above that, better results may be obtained by lithotomy. If lithic acid stone, crushing may result in impaction of the angular crystals and require other proceedings for their removal. Had seen several instances where the renal affection was rapidly improved by the removal of the stone. With Bigelow's method, however, many of the contra-indications to both operations are done away. The time of convalescence is always much shorter by this method, a point at times necessary to be considered. It may be used whenever the urethra is sufficiently developed to admit the passage of the instrument. Had never met with much hæmorrhage from lithotomy, and in performing that operation, he cuts clean across the prostate.

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Analyses, Selections, etc.

Examination of a Pharmacist.—A most worthy friend vouches for the actual correctness of this examination by the Commissioner in Pharmacy in a Northern State. It is reported in the *Pharmaceutidal Record*, April 1st 1883. Of course the applicant did not receive his license to practise pharmacy.

Q. What are Cantharides? A. Small flies; look like cassia buds, only a great deal smaller.

Q How is Opium obtained? A. By exudation from the sides of the poppy-tree.

Q. What materials are employed for obtaining carbonic acid gas? A. A covered jar and a small bit of phosphorus.

Q. What is saffron? A. The wood from a tree—in red shavings.

Q. How is Ferri Oxidum Hydratum made? What are its principal uses? A. OH or hydroxide is added to H, forming H.OH or H_2O=water. This is added to Ferrum, and you get Hydroxide of Ferri; from this the preparations of iron are made.

Q. Give the general directions for making Fluid Extracts? A. Heat is applied to the drug, with menstruum added in vacuo, and the volatile part of the liquid is saved and condensed.

Q. What are the components of Pil. Hydrarg? A. Oxide of Lead, Hydrargyri, and Sweet Oil.

Q. What is Sulphur Lotum? A. Flowers of Sulphur.

Q. What is Benzoin? A. Benzoin is from England originally.

Q. What is sulphur; how obtained? A. Sulphur is obtained from sulphurets found in sulphuric acid, then put by to form a powder.

Q. What is Ammonia? A. Ammonia is a mineral brought from Europe—a white crystal.

Q. What is Bismuth? A. Bismuth is a white powder from Nitrato-Subcarbonato-Potash.

Q. What is Calcium? A. Calcium is taken from Gum Opium; it is a salt—used for quieting—poison in over-doses.

Q. What is Ferri Chloridum? A. Ferri Chloridum is made from Ferri shavings and rect. spirits.

Q. What is Sulphate of Iron? A. Sulphate of Iron is made by precipitating sulphur with iron with heat.

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Treatment of Fracture of the Outer Third of the Clavicle.—Prof. Lewis A. Sayre, of New York, during the late session of Bellevue Hospital Medical College, delivered a clinical lecture on this subject. We make our notes from a reprint from the March No., 1883, of the *New England Medical Monthly*. Dr. Sayres' plan of treatment is this:—Take two strips of adhesive plaster, two and a half inches wide for an adult. Pass one strip around the arm at the junction of the lower and middle third—one end of the strip being united behind the arm to the same strip which is to be passed around the body, making a loop and leaving an open space at the posterior part of the arm. This loose loop arrangement prevents strangulation. Then drawing the arm back, he brings the pectoralis major muscle upon the stretch; but the acromial end of the clavicle still rides under the sternal fragment or end. He now secures the arm back by passing the long end of the strip of adhesive plaster around the body, bringing it two or three inches under the arm of the opposite side, across the thorax and fastens it to itself somewhere about the middle of the back. Care must be taken not to draw the arm too far back, but just sufficient to put the pectoralis major on the stretch.

Dr. Sayre then takes the other strip of adhesive plaster, and makes a slight longitudinal slit in the centre to admit the point of the elbow. Now flex the arm at an acute angle over the chest, drawing it upward, forward and inward—thus reducing the fracture. After bringing both fragments of the bone into a direct line, you now secure the arm in this position by first placing the centre of the elbow in the longitudinal slit in the adhesive plaster, then pass one end of the strip across the back, diagonally to the opposite shoulder; then bring the anterior end of the strip up along over the flexed arm and the hand, over the chest and fasten it to the posterior end of the strip at the shoulder. If this plan be carried out carefully, it will yield a perfect result without deformity.

"One advantage of this plan of treatment is this: it is absolutely impossible to dress a fracture of the clavicle in a child with any complex bandage satisfactorily, whereas in this your bandage is perfectly secure, and there is no possibility of its becoming displaced. Never use an axillary pad, as the pressure by this means often stops the circulation of the arm and the pain following this occurrence is something terrible.

It is impossible now to displace those fragments as I have

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dressed this man's injury, and he can go to work with his other hand. If you were to dress that fracture in such a manner as to render that man unable to use his other hand to earn his living, you ought to be compelled to pay for the loss of time which would follow such treatment. I have treated numbers of fractures in this manner with the most perfect results, and I defy any one to detect the point of fracture when cured; I say that a fractured clavicle can be cured without deformity. Excuse me for my warmth upon this subject, but I have been censured so recently by my own surgeons upon this point, that I feel compelled to reiterate my statement somewhat forcibly, and will demonstrate the fact before you in the case now before us, as I intend that you shall see this man when he is cured."

[The following week the man appeared before the class; the bandage was found to be in the same condition as when applied, the fracture was immovable, and the line of the clavicle perfect. Two weeks later the bandage was removed, perfect union having been secured; nor was there any deformity perceptible, the fragments having united in a perfect line.]

Electro-Magnet for Removing Particles of Iron from the Eye.—Dr. Lucien Howe gives the outlines (*Buffalo Med. Surg. Jour.*, March, 1883), of two cases, one of which shows that the magnet is useful in dislodging such particles from the cornea; the other suggests an improvement in the ordinary methods of removing them from within the globe.

The *first* was that of a laborer, who, when striking with a hammer on a flinty rock, suddenly felt something enter his left eye. A physician who was consulted, failed to notice any special cause for the pain of which the man complained, and, considering the injury to be a slight ebrasion, dismissed him with a prescription for an astringent lotion. Some slight injection, lachrymation and pain persisted. On the 7th of December, 1882, thirty-eight days after the accident, I found, in addition to the symptoms mentioned, a small dark speck on the outer part of the cornea opposite the edge of the pupil. Oblique illumination revealed this to be the end of a fragment of iron which subsequent measurements showed to be about one and one-half millimetre long and one-half millimetre broad. It had evidently struck the cornea with the point foremost, and passing inward, about one-half remained in that structure, while the other half projected into the anterior chamber. The point of entrance was partly

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closed, thus causing comparatively little pain or irritation. All efforts to remove the particle in the ordinary manner, by means of a needle, were painful and fruitless. On disturbing the end which was imbedded in the cornea, the other end could be seen to move in the aqueous humor. To persist in such attempts would be to run the risk of dislodging the piece and pushing it into the globe against the lens, producing cataract, or on to the iris, giving rise to severe inflammation. It would have been also dangerous to attempt to pass a knife in behind it, and push it outwards. To remove it with forceps of any kind was impossible.

The only hope of immediate relief was to draw out the fragment by means of a magnet. Fortunately this was at hand, in the form of the electro-magnet, described by Dr. Conrad Frolich in the *Klinische Monatsblätter für Augenheilkunde* for 1881, and manufactured by Hess, of Berlin. The eye had become so sensitive, from efforts at removal with a needle, and photophobia was so great, that it was deemed worth while to administer an anæsthetic. Having done this, the point of entry in the cornea was first enlarged, and then the pole of the electro magnet placed over the fragment. Instantaneously it was dislodged, a spurt of aqueous following its exit, as it came out attached to the point of the instrument. This case seems worthy of mentioning.

1st. Because of the peculiar position of the fragment and the consequent difficulties in its removal.

2d. Because the electro-magnet was useful in really *extracting* a particle of iron from the cornea—an application of that instrument which has seldom or never before been made.

The *second case*, was that of a machinist, who, while at work on a driving-wheel of an engine, was struck by a particle of iron on the left eye. He came under my observation on the day following, December 13, 1881. At that time he suffered no pain or other inconvenience, but there was slight ciliary injection; a small wound in the upper part of the cornea could be detected; and immediately beneath this a glistening fragment, which measured, subsequently, two millimetres by three-fourths of a millimetre. This had not penetrated the lens, but simply rested with the sharp point near the edge of the iris, as was shown by the ready dilatation of the pupil when atropia was used. Any ordinary instrument, when intruded into the anterior chamber, would be apt to tip the fragment over upon the lens, thus wounding the capsule and producing cataract; or, there was danger of

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a similar effect by attempting an iridectomy in the usual manner. In other words, it appeared eminently advisable, whenever the anterior chamber was punctured, that the fragment should be drawn out at once through the opening—that it should not be pressed between the posterior surface of the cornea and the anterior surface of the lens, or, at least, that the iris be kept interposed between the sharp edges of the iron and the lens, in order to protect the latter.

With a view to accomplishing this, the handle was cut off of an ordinary iridectomy knife, and the blade screwed firmly into the helix of the electro-magnet, already referred to. The patient having been etherized by Dr. J. M. McWharf, an opening was made at the edge of the cornea, in the usual manner for performing an iridectomy. As soon as the magnetized knife approached the fragment, the latter bent over and attached itself to the point of the instrument. But unfortunately for the perfection of the operation, when the knife was withdrawn through the narrow opening the fragment of iron was scraped off, as it were, and still remained in the interior of the globe, partly hidden in the folds of the iris. Every attempt to extract the fragment alone was unsuccessful, and it was therefore necessary to draw out a large part of the iris surrounding it, and cut it off.

The wound healed readily, and the only disadvantageous effect remaining was the irregular form of the pupil, the inevitable result of the iridectomy.

The case presents three points of interest:

1st. The position of the fragment was unusual, such particles being arrested much more frequently by some resisting tunic of the eye than by the soft tissue of the iris.

2d. The use of a magnetized knife in this locality has not before been recommended, at least to my knowledge, and the good purpose which it served, up to a certain stage, shows that the suggestion is worthy of some little consideration.

3d. The fact that the particle was wiped off from the knife as the latter was being withdrawn through the edges of the wound shows the necessity of modifying this part of all similar operations, no matter in what part of the eye the foreign body is located. In other words, it is desirable that at the moment of exit the wound be made wider to facilitate the withdrawal of the instrument with the attached fragment, as could be accomplished, for example, by dilating the wound at that instant with a pair of fine forceps.

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The result obtained in this second case might be considered satisfactory, and the method of operating at least safer than that formerly employed. But reflection upon the details of the procedure shows that greater improvement might have been made.

Treatment of Tapeworm.—At the meeting of the Cincinnati Academy of Medicine, March 26th, as reported in the *Lancet and Clinic* of April 14th, Dr. A. B Thrasher reported an obstinate case of tapeworm which was entirely expelled after the use of Tanret's Pelletierin. All the other remedies, as kousso, the decoction of the pomegranate bark, pumpkin seed, etc., had proved futile. He then put the patient on milk diet, gave a saline cathartic in the evening, repeated it the next morning, and a few hours later administered one ounce of Tanret's Pelletierin. The effect of this agent was somewhat peculiar; it caused no pain but a slight paralysis—or rather paresis—in one of the upper extremities. This, however, passed away in from one-half to one hour, and was not followed by any other unpleasant symptoms. Two hours after having given Pelletierin he gave the compound jalap powder, and in four hours the worm passed away entire—head and all—but still alive. Although thirty to forty feet had been brought away at a previous treatment it had hitherto been impossible to remove the worm entire, and yet nothing was so easy in its action as the Pelletierin. One objection is its rather high price, and the other is that Tanret has prepared it in the shape of a patent medicine, giving the preliminary treatment, dose and other directions on the label, so that it can be bought like any other nostrum. The mode of its preparation from the pomegranate bark sests with the manufacturer, Tanret, and is a secret.

Dr. Cleveland had no personal experience with the preparation, but a friend of his had tried it in a couple of obstinate cases where the result was just as unsuccessful as it had been from the pumpkin seed, pomegranate bark and kousso, which had been given before. Pomegranate bark seems to be the most efficient tenifuge and is the agent that most of the barbers, or so-called tapeworm specialists, use. It is a singular thing, however, that these people are more successful than physicians and yet this is a common fact. The secret seems to be that they give it in enormous doses and procure the drug *fresh*. The ordinary pomegranate bark is not fresh and consequently inert. He remembered a case in which he had given this agent without the desired result and after-

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wards learned that a certain barber had been successful with a secret remedy that he obtained from an uptown drugstore. The speaker, after investigating the matter, found that the barber too had used the pomegranate bark but gave it fresh and in enormous doses. The speaker had better success with the pumpkin seed but found that the patients suffer from excessive thirst afterwards.

Dr. Wm. Judkins stated that in a couple of cases in which he had tried everything ineffectually he succeeded at last with *elaterin*. He first resorted to the preliminary treatment mentioned before, followed in the evening by a purge. The next morning one-quarter of a grain of elaterin in a four-ounce mixture was given in one dose and it acted like a charm in both cases. A friend of his had tried the same agent with equal success.

Dr. Wilfert remarked that he had used Pelleterin in several cases with success, an account of which he published in the *Lancet and Clinic* some time ago. Pelletierin is sold in vials containing thirty grammes, the contents of which form a dose. No preliminary treatment is necessary beyond cleaning out the bowles the night previous to the administration, either with compound tincture of jalap, as was his custom, or somethlng else. A slight dizziness follows the use of the anthelmintic, but it soon passes off. The reason why others have not been successful with the pomegranate bark is because they have not obtained it sufficintly fresh. Tanret procures the bark quite iresh and whilst so extracts the active principle to which he has given the name. Pelletierin after the celebrated French chemist Pelletier. The pomegranate root contains several alkaloids of which, however, only two have medicinal properties. The tanate of Pelletierin is not reliable; it is only a mixture of the alkaloid of the bark with tannic acfd. The pure alkaloid is the active agent and if properly used will prove successful in every instance.

Special Remedies of Value in Inebriety.—Our object is to call attention to some of the remedies that are being used in the treatment of inebriety, and indicate their general value, from the experience of to-day. We would not have the reader infer that these are the only therapeutic agents of use in the treatment of inebriety, or that we call attention to them simply as advertisers in this journal.

Most of these remedies have been tested clinically from samples sent direct from the manufacturer, and while we

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have not yet completed the clinical observations of these drugs, enobgh has been ascertained to fully sustain the following endorsements. *Coca* and *Jamaica Dogwood*, prepared by Park, Davis & Co. of Detroit, either used in combinatisn, or separately, have often a marked action as a nerve tonic and sedative. The *coca* has been given as a tonic in cases ef great debility, and so far seems of greater value than quinine. The dogwood is in some instances a very pleasant narcotic and is always worth a trial. The *Vitalized Phosphates* of F. Crosby, New York, have in our hands proved to be of much value in cases suffering from great debility and acute dyspepsia.

Lactopeptine is another remedy that has a peculiar value in inebriety where nutritive disturbances are present. *Fellows' Hypophosphites* may be placed in the same list, as a remedy that should be tried in all these cases of chronic inebriety, where conditions of profound neuræsthenia are associated with this disease. *Horsford's Acid Phosphate* should be used in every case of inebriety, and as a general tonic and erve sedative it seems unequaled, but should be given manyn weeks after the alcohol is withdrawn. *Avena Sativa*, by Keith & Co. of New York, is a remedy about which much difference of opinion exists. From a limited observation it is evidently a medicine of some value, and has been used with success to combat the peculiar exhaustion from opium and alcoholic inebriety. The value of *Bromida*, prepared by Battle & Co. of St. Louis, is so well attested that it needs no comment.

The Horsford Acid Phosphate, the Hypophosphites of Fellows' and the Vitalized Phosphates of Crosby, have each a personal value in all cases of inebriety, but we need further study to determine their use minutely. The other remedies have been found essential, and should always be included in the means used to treat inebriety.—*Quarterly Jour., Inebriety*, April. 1883.

Smoking OPium.—By the *Review of the Drug Trade of New York for the year* 1882, prepared by D. C. Dobbins, Esq., we are informed that the import of opium in 1882 was 227,126 pounds, against 385,060 in the previous year, and an average of 285,133 pounds for the three years preceding; while of *opium prpared for smoking*, which has been subject to a specific import duty of $6 per pound, there has been a very great increase of importation as compared with former years. Smoking opium finds its way into this country *via*

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San Francisco, and heretofore has been considered to be mainly consumed by our Chinese residents. But the import of 106,221 pounds in 1882, against 76,446 pounds in the previous year, and a maximum import of 77,196 pounds in any previou year, has already arrested public attention, and we are pleased to notice that a movement has been made in Congress to place the vicious use of this preparation under some restraint. The Customs tax on this article has been advanced on the conference tariff list to $10 per pound.

Book Notices, &c.

International Encyclopœdia of Surgery, a Systematic Treatise on the Theory and Practice of Surgery. By Authors of Various Nations. Edited by JOHN ASHHURST, Jr., M. D., Professor of Clinical Surgery in the University of Pennsylvania, etc., Illustrated with Chromo-lithographs and Wood Cuts. In six volumes. Vol. II. Pp. 754. New York. 1882. William Wood & Co. (For sale by West, Johnston & Co., Richmond.) Cloth, $6. Sheep, $7.

The first volume of this excellent work has already been noticed. Prominent among the American contributors to volume II, we mention Dr. J. H. Bill, who contributes the section on sabre, bayonet, and arrow wounds; P. S. Conner on gunshot wounds; J. W. Howe, on diseases of the cellular tissue. Hunter McGuire, contusions; J. H. Tackard, poisoned wounds; Thomas G. Morton, effects of heat, besides other valuable papers by foreign and other American contributors. This second volume contains, in addition to numerous wood-cuts, fifteen well executed chromo-lithographs. There can be no doubt as to the success of this work. It is a monumental work, so far as we can judge from the first and second volumes, and the name of Dr. Ashhurst as editor is sufficient surety that the work will be, in every respect, a credit to the profession. The work will bear a careful review, and we regret that want of space prevents our giving it such a notice as would bring out some of its good qualities. The publishers have done their work well—not less so than the Editor and his colleagues. It is published in the English, German, French and Spanish languages. We notice, with regret, that the American Publishers' price for it is almost double that of the French. True, the French edition is bound in paper, but one can buy it in Paris and have it bound in half Russia for much less than the cloth-bound American edition costs. The natural result will be

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and is, that many Americad physicians will send to Paris if they wish to get the French edition. The book, vol. II, has a good index. W G. E.

Electricity in Medicine and Surgery. By GEO. C. PITZER, M. D., Professor of Theory and Practice of Medicine in the American Medical College, St. Louis, etc. St. Louis. 1883. Pp. 83. (From the author.)

"The object of this work is to furnish the medical student with a book containing the principal facts embraced by the subject of electricity and electro-therapeutics." The various machines now in use are described, and, their points, good or bad, brought out. The work is very concise, and no useless discussions are entered upon. It is an excellent work for a country practitioner or for one beginning the study of electro-therapeutics. Its especial merit is that nothing is taken for granted; the very first principles are explained in detail. For these reasons we endorse it. W. G. E.

Rheumatism, Gout, and Allied Disorders. By MORRIS LONGSTRETH, M. D. One of the Attending Physicians to the Pennsylvania Hospital. New York. 1882. Pp. 280. William Wood & Co. (For sale by West, Johnston & Co., Richmond).

The day for treating rheumatism with "flannel and six weeks" is over. The salicyl treatment has entirely superceded this, as it has most of the other "remedies" for rheumatism, except under unusual circumstances. The experiments and conclusions of Maclagan and Stricker show that in the present state of our knowledge, the salicyls are *the agents in the* treatment for acute rheumatism. Of the 280 pages in the book, 249 are given to the consideration of rheumatism; the remainder to gout. We wish that more space had been given to gout, but not less to rheumatism. This is the October (1882) No. of "Wood's Library of Standard Medical Authors." W. G. E.

Mental Pathology and Therapeutics. By W. GRIESINGER, M. D., Professor of Clinical Medicine and of Mental Science in the University of Berlin, etc. Translated from the 2nd German Edition by C. LOCKHART ROBINSON, M. D. Cantab, etc., and JAMES RUTHERFORD, M. D., Edinburgh, New York, July, 1882. Pp. 375. William Wood & Co., (For sale by West, Johnston & Co., Richmond, Va)

Griesinger has been, for some years, the acknowledged leader of medico-psychological thought in Germany, and thus has gained a high reputation in other countries. His

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work was translated into the French as early as 1865, and into English in 1867. The second edition has been enlarged and thoroughly revised, the most marked alterations and additions occurring in the parts of the book relating to etiology, pathological anatomy, the anatomy of the brain, and the complications and treatment of insanity. A new section on general diagnosis has been added, as well as on idiocy and cretinism, which were omitted from the first edition. A capacious index completes the book. This is the July, (1882) No. of "Wood's Library of Standard Medical Authors."

W. G. E.

Treatise on Therapeutics, Comprising Materia Medica and Toxicology, with especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. WOOD, Jr., M. D., Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System, in the University of Pennsylvania, etc. Fourth Edition, Revised and Enlarged. Philadelphia, 1882. J. B. Lippincott & Co. Pp. xii—736 (For sale by West, Johnston & Co., Richmond.)

For some years, Wood's *Therapeutics* has enjoyed an enviable reputation both as a text-book for students and a work of reference for the practitioner. Hence we have no doubt that the fourth edition will receive a hearty welcome from the profession. Dr. Wood's reputation as a practitioner has added no little to the past success of his work, and will contribute much toward it in future. As usual, the fourth edition has two indices—one of therapeutic agents; another of diseases. The publishers have neglected no part of their work. It is brought out in their usual commendable style.

W. G. E.

Functions and Disorders of the Reproductive Organs in Childhood, Youth, Adult-age, and Advanced Life, considered in their Physiological, Social, and Moral Relations. By WILLIAM ACTON, M. R. C. S. etc., Sixth Edition. Pp. xii—267 Philadelphia. 1883. P. Blakiston, Son & Co. Cloth, $2. (For sale by West, Johnston & Co., Richmond.)

Were not the name of the author sufficient guarantee for the value of this book, the fact that five editions have already been exhausted should dispel any doubts on the subject. In it "the continent student will find reasons for continuing to live according to the dictates of virtue. The dissolute will be taught, on positive and irrefragable grounds, the value of self control. The bachelor who is often placed in a try-

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ing social position, will glean consolation from observing that not only are his sexual sufferings recognized, but that rules are given him for their mitigation. The married man will find advice and guidance in order to avoid excesses. The surgeon will learn how to manage those difficult cases—the hypochondrical and the libertine." W. G. E.

Treatise on Fractures. By LEWIS STIMSON, B. A., M. D., Professor of Surgical Pathology in the University of the City of New York; Attending Surgeon to Bellevue and the Presbyterian Hospitals, etc. With 360 Illustrations on Wood. Philadelphia: Henry C. Lea's Sons & Co. 1883. Pp. 598 (For sale by West, Johnston & Co., Richmond, Va.)

It would not be less than a compliment to Hamilton's work on Fractures, to say that Stimson's book will take an equal stand with it. Prof. Stimson seems to have looked up the whole available literature of the subject; and with a valuable experience from which to draw material, has written a book which the medical profession will not be slow to recognize as being of great value.—W. G. E.

Systematic Treatment of Nerve Prostration and Hysteria. By W. S. PLAYFAIR, M. D., F. R. C P., Professor of Obstetric Medicine in King's College, etc. Philadelphia: Henry C. Lea's Sons & Co. 1883. 12mo. Pp. 111 (For sale by West, Johnston & Co., Richmond.)

A work of this kind from Prof. Playfair needs no praise from our pen. He is a well-recognized authority both in England and America, and we gladly welcome this little work on so obscure a subject. But there is no index to the book. Henceforth and forever, publishers should refuse to send out any book, on medical subjects, without an index. Such a defect detracts from the value of the whole book—W. G. E.

Practical Medical Anatomy. A Guide to the Physician in the Study of the Relations of the Viscera to each other in Health and Disease, and in the Diagnosis of the Medical and Surgical Conditions of the Anatomical Structures of the Head and Trunk. By AMBROSE L. RANNEY, A. M., M. D. Adjunct Prof. of Anatomy and Late Lecturer on Genito-Urinary Diseases and Minor Surgery in the Medical Department of the University of the City of New York, etc., etc. New York: William Wood & Co. 1882. Pp. xxii —339. (From Publishers.)

As a lecturer and teacher of anatomy, Dr. Ranney is well-known. This book the June (1882) number of "Wood's Library of Medical Authors," sustains the high reputation

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which the author already bears as a writer, especially in the field of applied anatomy. Some portions of the work have already appeared in medical journals, both in this country and Europe, but have been altered and enlarged. Though the title does not mention the fact, the book is profusely illustrated.

W. G. E.

Diseases of Women. Their Pathology, Diagnosis, and Treatment, including the Diseases of Pregnancy. By GRAILY HEWITT, M D. Lond., F. R. C. P. Professor of Midwifery and Diseases of Women, University College, London, etc. Fourth American, from the last Revised and Enlarged London Edition with 132 illustrations. Philadelphia: P. Blakiston, Son & Co. 1882. Pp. xxii—751. Octavo Series. Two parts in one. Cloth $2.50. Paper $1.50.

The medical faculty should congratulate themselves that this well known work has been issued in so cheap a form, and the publishers are to be congratulated that they have made so wise a choice for their well selected octavo series. The book is a very safe guide for any one undertaking the study and practice of gynæcology. W. G. E.

Dispensatory of the United States of America By DR. GEO. B. WOOD, and Dr. FRANKLIN BACHE Fifteenth Edition. Rearranged, thoroughly revised and largely rewritten. With Illustrations. By H. C. WOOD. M. D., Professor of Materia Medica and Therapeutics, University of Pennsylvania. etc. JOSEPH P. REMINGTON, Ph. G., Professor of Theory and Practice of Pharmacy in Philadelphia College of Pharmacy, etc., and SAMUEL P. SADTLER, Ph D., F. C. S., Professor of Chemistry in Philadelphia College of Pharmacy, etc. Philadelphia; J. B. Lippincott & Co., 1883. Leather. 8vo Py. 1928. Price, $8. (For sale by West, Johnston & Co., Richmond, Va).

It would ordinarily seem to be a sufficient notice of his invaluable and essential work to state that a new edition is just issued, containing corrections of most of the errors to be found in the former editions, and numerous additions, both as to the subjects heretofore considered, and as to articles of the Materia Medica not mentioned in the former editions. But the present issue is so great an improvement over its predecessors that we would be neglectful of obvious duty not to call attention, in a general way, to at least two of the important features of the publication now before us. In the first place, a work of this kind requires a corps of at least three competent editors—one for questions relating to Materia Medica, pharmacy, etc; one for the chemical department, and one for the physiological and therapeutical action of drugs. This edition has had the advantage of thorough re-

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vision by three such competent editors. Another improvement made in this edition is that chemical analyses of most of the important mineral springs of the United States are stated, as well as many of the most renowned springs of Europe. One consults his *Dispensatory* for the purpose of learning facts—*not* opinions. In this respect, the present work is especially to be commended. Even under the most tempting inducements for each of three editors to be led into speculations and discussions in their respective fields of labor, they have escaped this ground for criticism. Another "improvement" which may have been "the last, but not the least" in importance or interest, is that the price of the book is now reduced to eight dollars—bound in "sheep." Every druggist and pharmacist throughout the country is almost compelled to have this work; so it is with country practitioners who have to compound their own medicines. Town and city doctors *ought* to have it for obvious reasons. The "revised" or fifteenth edition, now under notice, will remain as authority with druggists, doctors and in medical jurisprudal matters for five or ten years.

Headaches: Their Nature, Causes and Treatment. By WM. HENRY DAY, M. D., M. R. C. P., Lond., etc. Fourth Edition. With Illustrations. Philadelphia: P. Blakiston, Son & Co. 1883. 8vo. Pp. 149. (From Publishers). Price, $1.25. Paper, 75.

We have already noticed the third edition of this valuable book. From what we know of that edition, we are not surprised that a fourth has been called for. The work has been recommended by the journals, and commended by leading specialists both of this country and of Europe. We have found it to be a very useful book for consultation in reference to peculiar cases of headache.

PAMPHLETS, REPRINTS, ETC., RECEIVED for which we have no room for fuller notice, etc.; but most of which can be obtained by enclosing a letter stamp for pamphlet to the respective authors named.

Review of the Drug Trade of New York for the Year 1882. Prepared by D. C. DOBBINS, ESQ. 1883. Paper. 8vo. Pp. 12

Opium Habit: Its Successful Treatment by the Avena Sativa. By E. H. M. SELL, A. M., M. D. 1883. 8vo. Pp. 32. [We have never before been so favorably impressed as to the value of avena sativa or common oats, in the treatment of the opium habit as we have been by an examina-

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tion of this paper. Dr. Sell proves conclusively by the affidavits even of patients and their friends, and by the recorded experience of many practitioners in all parts of the country. Other uses of this drug are also named. The concentrated tincture of avena sativa is not a secret preparation, but the working formula for making it is given by Mr. Geo. H. Keith, of the firm of B. Keith & Co., 41 Liberty St., New York.]

Fourth Annual Report of the Board of Health of Memphis, Tenn. 1882. G. B. THORNTON, M. D., President. 8vo. Pp. 26.

President's Address before the New York Medico-Chirurgical Society. 1882. By E. P. FOWLER, M. D. 8vo. Pp. 34. [After giving some facts as to the history of the Society, he discusses in a striking and convincing manner "medical education, and the rights of personal opinion," "etiology," "cure and recovery," and homœopathy. Does the term signify anything which exists?—Nature of disease.]

Prescription of Proprietary Medicines for the Sick—Its Demoralizing Effects on the Medical Profession. By C. A. LINDSAY, M. D., Professor of Materia Medica, etc., Medical Institution of Yale College, New Haven, Con. 8vo. Pp. 16. (A forcible presentation of the subject.)

Addresses by LEVI C. LANE, A. M., M. D., Professor of Surgery, and EDWARD R. TAYLOR. (Delivered on the occasion of the dedication of Cooper Medical College Building, San Francisco, Cal.) 8vo. Pp. 42.

Abdominal Section in the Treatment of Ulceration and Perforation of the Cœcum and the Appendix Vermiformis. By WM. A. BYRD, M. D., Quincy, Ill. 8vo. Pp. 4. (This paper, of great practical importance, was read before the American Medical Association, 1881.)

Bacteria, and Their Presence in Syphilitic Secretions. (From the Clinic of Prof. Newmann, in Vienna.) By ROBERT B. MORRISON, M. D., Baltimore. 8vo. Pp. 4. (Reprint from *Maryland Med. Jour.*, Jan. 1, 1883.)

Study of the Malformations, Variations and Anomalies of the Circulatory Apparatus in Man, with a Brief Consideration of some of the Principles Governing their Production. By RANDOLPH WINSLOW, M. D., Baltimore, Md., Demonstrator of Anatomy, University of Maryland, etc. 8vo. Pp. 40. (Reprint from *Annals of Anatomy and Surgery*, November and December, 1882, and January, February and March numbers, 1883.)

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Editorial.

The Index to Annual Vol. IX of the Virginia Medical Monthly will be found *lightly* attached in the advertising department of this number, *after* reading matter. It can be easily removed and bound with the annual Vol. IX, which was completed with March number, 1883.

The Tenth Annual Volume of the *Medical Monthly* begins with this April issue. We have perfected arrangements which we think will enable us hereafter to issue a better journal than heretofore—so far as the editorial and general management of the publication are concerned. We trust our friends will be prompt in renewing their subscriptions, and that they will also urge their friends to subscribe. We hope also that subscribers will keep us informed by correspondence, etc., of all items of medical interest that may transpire in their communities.

American Medical Association.—The Thirty-fourth Annual Session will be held in Cleveland, Ohio, on June 5, 6, 7, 8, 1883, commencing on Tuesday, at 11 A. M. Delegates receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by *representation in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States. Each Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association. Secretaries of Societies, as above designated, are earnestly requested to forward, *at once*, lists of their delegates. Also, that the Permanent Secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the Secretaries *are, by special resolution*, requested to send to him annually a corrected list of the membership of their respective societies.

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"The Chairmen of the several Sections shall prepare and read, in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections."

Practice of Medicine, Materia Medica and Physiology.—Dr. J. H. Hollister, Chicago, Ill., Chairman; Dr. J. G. Lee, Philadelphia, Secretary.

Obstetrics and Diseases of Women and Children.—Dr. J. K. Bartlett, Milwaukee, Wis., Chairman; Dr. G. A. Moses, St. Louis, Mo., Secretary.

Surgery and Anatomy.—Dr. W. F. Peck, Davenport, Iowa, Chairman; Dr. P. F. Eve, Nashville, Tenn., Secretary.

State Medicine.—Dr. Foster Pratt, Kalamazoo, Michigan, Chairman; Dr. T. L. Neal, Dayton, Ohio, Secretary.

Ophthalmology, Otology, and Laryngology.—Dr. A. W. Calhoun, Atlanta, Ga., Chairman; Dr. Carl Seiler, Philadelphia, Secretary.

Diseases of Children.—Dr. R. F. Blount, Wabash, Ind., Chairman; Dr. J. H. Sears, Waco, Texas, Secretary.

Oral and Dental Surgery.—Dr. D. H. Goodwillie, New York city, Chairman; Dr. T. W. Brophy, Chicago, Ill., Secretary.

A member desiring to read a paper before any Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting.

Committee of Arrangements.—Dr. X. C. Scott, 393 Euclid Avenue, Cleveland, Ohio, Chairman.

Proposed Amendments to the Constitution.—Offered by Dr. N. S. Smith, Dakota: "To provide for the admission to membership of two delegates from the Medical Bureau of the United States Indian Service, to be nominated by the Surgeon-in-Chief of that Bureau, and approved by the Secretary of the Interior."

Offered by Dr. J. M. Toner, D. C.: "That the office of Permanent Secretary be vacated, and that the Nominating Committee hereafter annually nominate a Secretary who will serve without compensation."

Offered by Dr. F. Pratt, Mich.: "That the law requiring the nominations for officers to be made *from those members present at the annual meeting*, shall apply only to the President, Vice-Presidents, Chairmen and Secretaries of Sections, the Assistant Secretary, the Chairman of the Committee of Arrangements, and the Judicial Council."

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Offered by Dr. J. M. Keller, Ark.: "To permit the holding of the annual meeting as late as the first Tuesday of September, if desirable."

Offered by Dr J. H. Sears, Ark.: "That the Chairman and Secretary of each Section may add any number of earnest workers to their Sections, in addition to those named by the Nominating Committee, and that the Librarian be made a permanent officer."

Amendments to By-Laws.—Offered by Dr. J. W. Smith, Iowa. Art. II, Sec. 8. Permanent Members: strike out the words "but without the right of voting."

Wm. B. Atkinson, M. D., 1400 Pine st eet, Philadelphia, Pa., is Permanent Secretary.

Medical College of Virginia.—The Court of Appeals of Virginia, in the case of a petition for *mandamus*, to compel the old Board of Visitors to the Medical College of Virginia to surrender to the newly appointed Board full possession of the buildings, property, etc., has rendered its opinion—Judge Lewis not sitting, the other four judges on the bench being unanimous in their judgment. In brief, the decision was that Governor Cameron had no authority to appoint a new Board under the charter granted the College years ago; that he can only fill vacancies as they occur by death, resignation, removal from the State, etc, etc.; that the Legislature alone has power in the premises to authorize the dismissal of the old, and the appointment of a new Board, etc. We are glad the court has arrived at a conclusion. We hope the effect of the agitation of the subject before the highest tribunal before which such a matter can be brought, will be that the old Board will become watchful, active and efficient. If we were wrong in thinking, with the evidence before us, that the College was not the success it ought to be, we shared only in the opinion of some members of the Faculty at the time. If we thought that the Board of Visitors, as then composed, was inefficient, we stated a few of the reasons in the November number which influenced our opinion. If we sought legislation at the hands of "the powers that be" to correct an error of law that seemed to us injurious to the interests of the medical profession of the State, we acted consistently with our record, as shown by our personal efforts to secure passage of certain so-called "medical bills" when Democrats were in authority. If we were at fault in discussing professional issues upon their *merits, without reference to ever changing political sentiments of the day*, we acted at least

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conscientiously; for we do not believe that the profession of medicine should belong more to one political or ecclesiastical party than another.

As the management of the Medical College of Virginia, by the decision rendered by the Court of Appeals, is practically continued in the same hands that it has been for years past, we trust both the Board of Visitors and the Faculty will energetically work to build up the College to its full extent of usefulness, and thus reflect credit upon the profession. With the adoption of a prudently liberal policy, both the Board of Visitors and the Faculty may fortify themselves against further exposure to disruption. We shall look for good results, and will rejoice whenever we hear of an established success of the College.

State Boards of Medical Examiners.—We make the subjoined clipping from the *Daily Dispatch* of this city (April 22nd, 1883), for the purpose of again directing the attention of practitioners residing in States where no adequately protective laws exist, to the subject named in the caption of this editorial. In order to secure success, it is proper to agitate the question in advance even of the nomination of legislators who are to be elected next fall. Many a respectful audience and even hopeful promise is given by the law-makers when they first take their seats in the General Assemblies; but afterwards the subject seems to be forgotten, or else the entire measure is frustrated and defeated by the introduction of substitutes, amendments, etc., all apparently for the purpose of defeating the passage of a bill already carefully studied and prepared by those who recognize the true need of the people. We trust this matter will be favorably considered by the several State Societies now soon to convene in annual session. Whatever may be the differences of opinion among regular doctors regarding other subjects of professional and public policy, there seems to be a unanimity of opinion concerning this one subject that ought to guarantee success in securing legislation. We would suggest that even if the bills introduced before the Legislatures looking to the establishment of proper Boards of Medical Examiners are not altogether sufficient to cover the exact wish of individuals, still let them pass, as they are introduced, to the statute books. A law once made is much more easily amended than it is to secure a perfect one in the beginning. Statutory errors generally work out their own remedy. Let these bills be introduced at the commencement of the legislative ses-

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sions, and be actively urged to as speedy a vote as may not seem to be two hasty. The time has come when the importance of having only qualified doctors in every community is being appreciated and demanded by the people at large.

The good results of such laws as are now advocated speak for themselves in the States which have adopted them. There is no better authority desirable for such a statement as is made in the letter appended than Dr. Dabney. Of our personal knowledge, we can confirm his statement as to the result of the rejection of candidates for practice by the North Carolina State Board of Medical Examiners, and we have heard of similar results of examinations made by the West Virginia Board, viz: "some, at least, of those rejected have come to Virginia to settle." What a sad commentary such a fact is upon the Virginia profession; and the result must necessarily become worse unless protection is granted by law. The State Boards of Examiners just referred to, and all others like them in the impartial thoroughness of their examinations as to the qualifications of those who propose to enter upon the responsibilities of active practice should receive the encouragement and hearty endorsement of true doctors everywhere.

We are glad to learn that the Virginia Pharmaceutical Association, during its meeting this spring in Norfolk, will take up this matter—so far as applies to pharmacists of the State. While we wish for their proposition a glorious success, perhaps it would be safer for the two professions—pharmacists and practitioners of medicine, etc.—to introduce two separate bills in the Virginia Legislature during its session next winter. If one fails, the other may succeed; and if either succeeds, that one will become a help to secure the adoption of laws needed by the other profession.

The subject we have thus referred to involves no sacrifice of one political party to the principles of another party. Therefore let *all* legislative nominees—regardless of political preferment—be instructed as to this demand of the times; and then we shall hope to see the almost unanimous passage of a law which, if not altogether adapted to every emergency, will nevertheless result in common good. Insufficient legislation may be improved, or too exacting laws may be corrected during the following legislative session. Persuasion, and not force nor threat, is what is now needed to accomplish the end in view.

Unlike preachers, we append instead of prefix the text for our remarks, remembering that men are prone to appre-

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ciate the interest and value of a book by the impression left upon their minds by the reading of the concluding chapter:

"*To the Editor of the Dispatch:*

It is perhaps not generally known that Virginia is one of the few States in the Union which permits any one to practise medicine within her borders without undergoing a preliminary examination, or furnishing satisfactory proof that he or she has received a medical education; but such is the case. No education, whether medical or general, is required; it is not even necessary that the applicant for practise shall be able to read and write, and there are some so-called physicians in the State who can hardly write their own names.

In the States of North Carolina and West Virginia they have very stringent laws with reference to the qualifications of physicians, and I am informed that applicants frequently fail to pass the required examination, and then some, at least, of those rejected have come to Virginia to settle. Surely 'these things ought not so to be.' It cannot be expected that the qualifications of a physician could be judged by any but members of the medical profession, and it is eminently desirable that our law-makers should take steps looking towards the establishment of a competent medical examining board, before which every one proposing to commence the practice of medicine in Virginia *hereafter* shall be required to pass a satisfactory examination.

Yours, etc., WILLIAM C. DABNEY, M. D."

Charlottesville, April 20, 1883."

An Instantaneous Light.—Such, in a word, is the unique apparatus on exhibition at the rooms of the Portable Electric Light Co.. 22 Water street, Boston. It occupies the space of only five square inches and weighs but five pounds, and can be carried with ease. The light, or more properly lighter, requires no extra power, wires or connections, and is so constructed that any part can be replaced at small cost. The chemicals are placed in a glass retort; a carbon and zinc apparatus, with a spiral platinum attachment, is then adjusted so as to form a battery, and the light is ready. The pressure on a little knob produces an electric current by which the spiral of platinum is heated to incandescence. The Portable Electric Light Company was recently incorporated, with a capital of $100,000, under the laws of Massachusetts. The usefulness of the apparatus and the low price

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($5) will no doubt result in its general adoption. Some of the prominent business men of the State are identified with this enterprise. In addition to its use as a lighter, the apparatus can also be used in connection with a burglar-alarm and galvanic battery.—*Boston Transcript*, Dec. 30.

[We have thought it to the interest, especially of the medical profession, to call special attention to this apparatus. Our attention was first called to it by an article in the *Scientific American*.]

The National Vaccine Establishment, at Washington, D. C., has been of incalculable benefit to the people and profession of the country during the past winter, and is still doing an excellent business. Notwithstanding the statements of many who announce their preference for humanized virus (as shown in part by the report of the discussion in the Baltimore Society, published in this issue), we venture the assertion that many more serious results have followed its use than the use of animal vaccine as secured from responsible cultivators. The fact that Dr. Raalph Walsh is Director of the National Establishment, is proof in itself that honesty in business transactions and purity of vaccine matter will be sent to purchasers. As the summer heat will soon be upon us, when it would be preferable not to vaccinate, *cæteris paribus*, and as the smallpox epidemic does not by any means seem to be over, we would urgently insist that every practitioner who has thus long neglected his duty in this direction should at once see to it that his patients are protected from even varioloid by proper vaccinations. There is no better virus obtainable than that cultivated at the National Establishment; and the Dickson combined quill slip and scarifier, on which the virus is deposited ready for application, has all the advantages ready for use.

Personals, Items, etc.—*Dr. Hunter McGuire's Infirmary.*—Dr. McGuire has leased for a term of years, the well built, capacious and eligible structure on Governor street, opposite the Governor's Mansion and the Capitol Square—for the purpose of establishing an infirmary chiefly for his private patients from a distance. The household offices of the institution will be managed by ladies, among whom will be found many of the best in the land. Drs. Hugh M. Taylor and Lewis Wheat will be associated with Dr. McGuire in the medical and surgical management of patient. The numer-

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ous non-resident patients now under Dr. McGuire's treatment in various hotels and boarding houses in this city, will probably go to the Infirmary as soon as the repainting and refurnishing the building can be completed. It will be opened for patients April 19th, 1883. The name selected by the ladies is, "St. Luke's Home for the Sick." The charity features are commendable. Its good management and success is assured.——*Dr. Frederick S. Dennis*, during the late annual meeting of the Faculty of the Bellevue Hospital Medical College, was appointed Professor of Principles and Practice of Surgery, in the place of Dr. Van Buren, deceased. ——*Qualification for Membership in State Societies.*—Last year, the Rhode Island Medical Society, adopted a resolution requiring candidates for membership hereafter to pass examinations on the usual branches of medicine, to give proof that he has adequate knowledge of Latin, and a good general education, and to promise that he will not practise an exclusive system of medicine. North Carolina does better. That State has an excellent Board of Medical Examiners, selected by her State Society, and no one can even so much as practice medicine in that Commonwealth—much less join the State Society—who is not deemed qualified. The result is, we know of no doctor in the "Old North State" who practices an exclusive system; and a better qualified class of medical practitioners is no where to be found.——*Drs. W. F. Mercer and Lewis C. Bosher* have been elected as Resident Physicians to Richmond City Alms House Hospital for the ensuing annual term. First rate appointments——*Dr. W. Fontaine Carrington*, formerly of Halifax county, Va., and for several seasons the Resident Physician at the celebrated Buffalo Lithia Springs, Va, we learn has removed to the Hot Springs of Arkansas to enter practice. He was a surgeon in the United States Navy until the war, when he entered the Confederate Navy. He was made Medical Director of the Army of Northwestern Virginia. He next was assigned as Medical Inspector of Camps and Hospitals of the Confederacy. On his transfer to the Naval Service, he served as Fleet Surgeon for Commander Lynch at Wilmington, N. C., and was Fleet Surgeon for Admiral Raphæl Semmes when the war closed. His professional attainments and skill will make him a gain to the community to which he has moved. We wish him health, success and happiness in his new field. ——*The Virginia Historical Society*, will publish at an early day, *The Records of the Administration of Robert Dinwiddie, Lieutenant-Governor of Virginia*, 1752–1757. The publica-

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tion, will of course, have great value, and it is believed that the issue of this work by the Secretary of the Society, R. A. Brock, Esq., will largely increase the interest of members and others in the affairs of this Ancient Historical Society. ——"*Origin of the Stars and Stripes.*"—We return thanks to the New York Life Insurance Company, of New York City, for this most tastefully designed and neatly engraved plate. The interesting collection of facts relating to the genealogy of Washington, and the origin of the American flag is now, for the first time, put into permanent form.

Obituary Record.

Reports of the Committees of the Piedmont Medical Association relative to the deaths of Drs. S. R. Rixey and A. E. Slaughter.

Dr. S. R. Rixey.—At the regular quarterly meeting of the Piedmont Medical Association at Orange, Va., on Monday, March 26th, 1883, a committee of five Fellows was appointed to draft suitable resolutions relative to the death of Dr. S. R. Rixey, of Culpeper, his death having been announced to the Association. The Committee made the following report which was unanimously adopted.

1. *Resolved*, That this Association has lost by the death of Dr. Rixey a useful colaborer and worthy member.
2. That the Profession, in the advancement of the interests of which he expended the best years of his life, has lost an earnest laborer and distinguished member.
3. That the community in which he lived, has lost a physician in whom their confidence was unreservedly reposed as it was justly merited.
4. That not only the profession has sustained a great loss, but the entire community will miss a worthy citizen, safe counsellor and tried friend.
5. That our sincere sympathies are tendered to the bereaved family of our deceased brother.

Committee.—Alex. Harris, M. D., E. W. Row, M. D., R. S. Lewis, M. D., R. M. Slaughter, M. D., W. J. Strother, M. D.

Dr. A. E. Slaughter.—At the same meeting, the death of Dr. Alfred E. Slaughter, of Gordonsville, was also an-

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nounced, and a committee appointed, who offered the following report which was adopted.

Whereas, We, the Fellows of the Piedmont Medical Association, are called in sympathy with a sorrowing community and a bereaved family, to mourn the death of one, who, though debarred fellowship with us by physical infirmity, was still our professional brother, and whose many admirable traits of mind and character make the more encumbent on us to offer the following resolutions to the memory of the late Dr. Alfred E. Slaughter.

Be it therefore resolved, That we mourn with deep sorrow the death of our friend and professional brother, Dr. A. E. Slaughter; for by his death, our profession has lost an ornament of which any calling might justly have been proud. Faithful to duty, strict and impartial in his demands to stand to the full measure of every requirement, whether that requirement be of a professional or a private matter, possessed of the strictest integrity, none could see in him other than that of the *gentleman*, and an example worthy of emulation. With a delicate constitution, that same high sense of duty took him through the four years of war, which so sorely tried far more robust men than he, and there he was ever found at his post. When the war-cry was hushed, in whatever capacity he was called there was the same adherence to principle. Later, when disease pressed hard upon him, he bore his afflictions with a calm meekness, and faced the end with a fortitude that could not have failed to elicit the admiration of all who saw him.

Be it further resolved, That we tender our sympathies to the family of our deceased brother, and may God be a protector to the widow, and a father to the fatherless, and teach them to remember:—"My thoughts are not your thoughts, neither are my ways your ways, saith the Lord."

Be it further resolved, That a copy of these resolutions be spread upon the minutes of the Piedmont Medical Association, and that the Secretary be requested to have them also published in the newspapers of Orange county, and in the *Virginia Medical Monthly*.

Committee.—J. W. Scott, M. D., E. W. Row, M. D., R. S. Lewis, M. D.

Dr. Wm. Holme Van Buren, M. D., LL. D., died at his home in New York, after an illness of some four months, probably due to cerebral hæmorrhage, on March 25th, 1883.

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He was born April 5th, 1819. His great worth to the medical profession cannot be too highly eulogized. His pupil and late partner in practice, Dr. Edward L. Keyes, delivered a memorial address before the New York Academy of Medicine, which though as thorough and elegantly prepared as it is, portrays but a part of Dr. Van Buren's greatness. His address is published at length in the *New York Medical Journal*, April 14th, 1883.

Dr. James K. Barnes, late Surgeon General, United States Army, died at his home in Washington, D. C., April 3d, 1883, age 65 years. He held the highest honor possible for one to hold in the medical service of the army, from the close of the war until he was placed on the "Retired List," in accordance with the law requiring the retirement of army officers on attaining the age 64 years. During his term of office, we never heard of a complaint against him. According to common testimony, he was just to all his subordinates, and was just as liberal as it was possible for him to be in providing for their needs and wants. He endeared those to him who knew him well, and became beloved by those who were under his command. He used the rod of authority only when plain and obvious duty required. When the wires announced his death, friends from all accessible parts of the country flocked to Washington to pay the last sad tribute of respect and honor to his memory that lay in their power.

Dr. Robert B. Tunstall, died suddenly, at his home in Norfolk, Va., April 1st, 1883, in the 65th year of his age. Always active in his efforts to do good—both as a Christian gentleman and as an eminent physician, his death will cause a void that few can fill. Brave as a lion when duty called upon him to act, he was yet forgiving toward his enemies; and his daily life was marked by the gentleness and modesty of a woman. His friends everywhere feel themselves to be in true bereavement.

The following are the resolutions passed by the Norfolk Medical Society, April 3d.

This Society has heard with profound regret of the sudden and unexpected death of Dr. Robt. B. Tunstall, one of its most prominent members, at one time its presiding officer, and ever notwithstanding the constant and pressing engagements of an extensive practice, one of the most regular and punctual attendants at its meetings, and a frequent participant in its discussions.

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Dr. Tunstall was born in August, 1818, was educated in this city and at Hampden Sidney College, Va., and subsequently pursued his medical studies at the University of Pennsylvania, where he was graduated in March, 1842.

His contemporaries will remember his gentleness of deportment; his assiduity in study, and his deferential regard for his seniors as a youth, and his later life being characterized by every attribute of true manliness proved the "child to be but father to the man."

Immediately after taking his degree in medicine he entered upon its active pursuit in this city. Possessed of a splendid physique, which seemed (even to the last) almost to defy any hardship, of manners the most prepossessing, an energy rarely equalled—never excelled—and of remarkable intellectual attainments, he soon gained, and maintained through an active professional career of forty-one years, the highest eminence.

During this long period he has ever set to his medical brethren, both young and old, not only a bright example of energy and industry and professional honesty and courtesy—qualities in themselves worthy of all emulation—but also to all men, the example of his Christian faith, having for many years been a constant attendant and an humble worshipper in the house of God.

Being, therefore, desirous of expressing and placing on record our sense of the calamity which has fallen upon us in the loss of our distinguished friend,

Resolved, That the name of Robt. B. Tunstall will ever be identified with this Society as one of its founders and most interested supporters.

Resolved, That in the death of our lamented brother, the medical profession has lost a most able, eminent and loyal member, the community a public spirited and most liberal citizen, and society one of its highest types of moral character.

Resolved, That words are inadequate to express our sorrow, that we can no longer in this world enjoy his professional companionship and profit by his wise counsels.

Resolved, That we sympathize most deeply with the family of our late brother in the bereavement with which it has pleased Divine Providence to afflict them.

Resolved, That this Society will attend the funeral in a body, and wear our usual badge of mourning for thirty days.

[Signed.] H. M. Nash, Wm. J. Moore, W. A. Thom, Committee.

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VIRGINIA
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RICHMOND, MAY, 1883.

Original Communications.

ART. I.—**Puerperal Eclampsia.*** By THOMAS J. MOORE, M. D. Formerly Vice-President Medical Society of State of North Carolina; Vice-President Richmond Academy of Medicine, etc., Richmond, Va.

Definition.—Puerperal eclampsia is that peculiar condition of the female incident to gestation, labor, and the lying-in state, characterized by convulsions of epileptiform type, and caused by certain pathological conditions of the blood and the kidney or kidneys of the puerperal woman. It is attributable to the effect of some one or more morbific elements circulating in the blood and acting as a direct excitant upon the brain and spinal column, producing thereby certain convulsive phenomena of a tonic and clonic character.

History.—The history of the disease extends far back in the literature of the profession, and much has been written both crude and unique. It was not until of late years, however, that we have had contributions that were valuable presented to us upon this subject; but the study of the various diseases, especially those of the convulsive type, together with a proper study of the diseases of the kidney, has lifted us above the vast mass of rubbish in which they were obscured, and caused the mind to take definite shape in regard

*Read before Richmond Academy of Medicine, April 2nd, 1883.

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to those conditions which inevitably lead to it as a resultant.

For the purpose of preventing repetition, I have thought it best to take up in succession, the physiological condition of the blood in the puerperal woman, the excrementitious products found in the blood in the eclamptic state, as well as those in the urine; then to offer some views upon the kidney as found in those who have died of eclampsia.

Physiological Condition of the Blood of Puerperal Women.—That there is a peculiar condition of blood brought about from conception and gestation cannot longer, I think, be successfully denied. It is true that Jacquimier has written an able paper attacking this view; but any one who will peruse with care the reply of M. Cazeaux, will be fully impressed with the fact that the ideas, advanced by M Jacquimier are untenable. This state of the blood has been fully and carefully examined by M. Cazeau, Andral, Gavarret, Becquerel, Rodier, Regnauld and others. From their investigations, we are inevitably led to the conclusion that the condition of the blood in pregnant females is that of chloro-anæmia or sero-plethora, as designated by M. Cazeaux, and that this was the condition which, previous to the appearance of his work in 1844, was believed to be a true plethora. Do not understand for a moment that I am attempting to affirm that we never have a truly plethoric condition in pregnancy; for unqestionably there are individual cases where a genuine plethoric condition exists. These, however, are rare, and bear but a small proportion to those who are affected as above described.

The symptoms of both of these conditions are unfortunately almost identical, and offer difficulties in the way of diagnosis which are nearly insurmountable. The want of appetite, the capricious tastes, nausea and vomiting, cramps in stomach, the various pains and aches, such as headache, toothache, and the neuralgia—frontal, facial, orbital, and temporal—are common to both. So in regard to the vascular system, fullness and hardness of the pulse, weight in the head, flashes of heat, flushings of the face, ringing of the ears, vertigo, pertubations of the heart, are all collective symptoms of either serious or true plethora.

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Arandal offers an ingenious as well as a plausible theory as to the cause of the identity of the symptoms. He asserts that the passage of the blood through the brain when surcharged with corpuscles produces the cerebral disturbances peculiar to plethora. An identity of symptoms would clearly indicate that a similar resultant was brought about when there was deficiency of corpuscles or sero-plethora. That chloro-anæmia exists in pregnancy in fact, is to be considered as the true physiological condition of the female when she has reached a stage more or less advanced, as has been ingeniously exhibited in the researches of M. Regnauld. In a table setting forth the state of the blood in pregnancy of twenty-five women, the examination extending from the second month, M. Regnauld reached the following conclusions:

(1) The serum of the blood is not only increased in quantity, but is deficient also in solid matter and therefore added to the watery element.

(2) That the blood corpuscles are diminished from the commencement of pregnancy. A marked decrease, however, in their number does not take place prior to the sixth month, and this derangement of proportion is liable to go on gradually increasing to the end of gestation.

The proportion of albumen, as asserted by Regnauld and confirmed by Becquerel and Rodier, falls below the normal standard from two to four parts—the physiological standard in the unimpregnated woman being 70.5, while the average impregnated varied from 68.6 to 66.4—the former being the recognized disproportion in the first six months of gestation; the latter, that of the last *three* months. The fibrin of the blood remains at its normal standard until the commencement of the sixth month. From this time, it progressively increases until delivery.

The increase of fibrin is thought by M. Hatin to be the resultant of an increased demand upon the mother by the growth of the fœtus, stimulating the vital powers and taxing her physical energy to meet this demand. This, he declares, is not alone peculiar to the child-bearing state, but under other circumstances where an increased vital action is ren-

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dered essential, the fibrin of the blood is found to be in excess, it is a true physiological action and not the constant resultant of inflammation as asserted by Andral and Gavarret.

The symptoms previously described as pointing out this sero-plethoric condition do not of course always present themselves as a whole. Sometimes those which may be considered as arising from nervous phenomena appear in the commencement of pregnancy, or rather in the first half of gestation, while those peculiar to the vascular condition occur at a later period. There is no constant rule, however, governing the case; all may appear at the commencement, or at the middle period or as gestation approaches its end.

The cause of this altered condition of blood is believed by M. Cazeaux to be attributable to the irritation of the uterus brought about by the new functional demands made upon it; and this organ acting upon the other organs of the body produces such general disturbance as to interfere with assimilation, thereby impairing nutrition which, in the end, eventuates in chlorosis. I will not further pursue this branch of the subject, but will only add that those local congestive conditions, which have been thought peculiar to true plethora, such as a feeling of weight in the pelvis, groins and upper part of the thighs, as well as pain in the region of the loins and kidneys, tension and enlargement of the abdomen, the hemorrhage that occasionally takes place from the womb, as also the discomfort of the fœtus occur much oftener in the feeble and anaemic than in those who are supposed to be robust or plethoric.

Another evidence offered as collateral testimony upon this subject is, that in treating females in this peculiar condition, those remedies that are believed to stimulate the production of blood globules, and to add to the albuminous elements of the blood, and which are generally used for chlorosis in the unimpregnated female, will be found most effective in re-establishing the normal relations of the blood and bringing about the desired result.

Products Found in Blood and Urine of Eclamptic Women.—We now come to speak of those products that are found in

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the blood and urine of women who are either strongly predisposed to eclampsia or are undergoing an attack. In the majority of cases urea is retained in the blood and albumen is found in the urine. I will not occupy your time by a discussion as to how urea retained in the blood affects the nervous system. The theory of Frerichs, supported by Braun, of Vienna, is one both ingenious in character and plausible in its nature. They insist that urea as urea is an inert substance, while circulating in the blood, and, to become morbific in nature, it must be converted into carbonate of ammonia—this process being brought about by fermentation; where the ferment is absent, quantities of urea may be retained in the blood without producing any serious consequences. Urea, as a *direct irritant*, is insisted upon by the majority of authors who have examined this matter, and they declare that conversion into carbonate of ammonia is not at all essential to evolve its poisonous activity. The latter school, while they concede that carbonate of ammonia is to be found along the alimentary mucous tract, in the lungs, and the bladder, deny that it undergoes absorption and produces those deleterious effects claimed for it by its advocates.

The normal quantity of urea found in healthy blood in relation to its other ingredients is asserted by Picard, of Strasburg, to be 0.16 per 1,000; in the puerperal state it rises to 0.18 per 1,000; Dr. Cruse, of Bellevue Hospital, New York, found it to run up to 1.0 per 1,000 in a woman who died of eclampsia, a most astounding increase over its normal proportion. So long as the laws governing vital action and its modifying influence upon chemical bodies are not definitely understood, so long as the catalytic power of bodies modified and controlled by vital action remain undetermined, no definite conclusions upon this subject can be arrived at. Urea as urea and producing that state of blood known as uremia, must remain as the recognized expression of this resultant, until something more definite and tangible can be adduced to occupy in the mind an expressive factor of greater exactness.

Albumen in the blood, its normal relations, its diminution

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in the blood of puerperal woman, has been previously discussed. When it makes its appearance in the urine at any time, and in any quantity, it becomes a factor of importance. There are many diseases in which it manifests itself. Febrile and inflammatory diseases, such as pneumonia, peritonitis, rheumatic fever, articular rheumatism, the zymotic diseases, as scarlet fever, measles, smallpox, typhoid fever, cholera, yellow fever, ague, diphtheria, etc., all produce it. Impediments to the circulation of the blood, emphysema, heart disease, abdominal tumors, cirrhosis, etc., hydræmic and dissolved states of the blood and atony of the tissues, such as purpura, scurvy, pyæmia, hospital gangrene, saturnine intoxication are causes which give rise to it. It is, however, in acute and chronic Bright's disease, pregnancy and the puerperal state that it becomes important as well as a signal of danger. It is in its connection with these last conditions that we have to deal, especially the two latter.

As a rule, healthy urine contains no albumen. When it does, it generally arises from the use of a highly albuminous diet, such as eggs in quantity, etc., or from dyspeptic derangements. At such times it appears as but a trace, and is transitory; but when albumen is found in an unusual quantity in the puerperal woman, it becomes a symptom of marked gravity. I regret that I have not been able to find what proportion of child bearing women develop albumen in the urine, as I consider this of decided value in determining with anything like precision the importance which the appearance of this element in the urine bears to puerperal conclusions.

Why does albumen appear in the blood of puerperal women? Does it arise from one cause alone, or are there a number of pathological influences brought into play which give it as a result?

The tendency of the blood in many cases of pregnancy to produce congestive condition in various parts of the body, together with its retention of certain excrementitious elements, such as creatine, creatinine and urea, seem to me may well be considered as an important factor in bringing about an extrudition of albumen through the kidney. It would

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hardly be tenable to assert for it this power alone, unconnected with any functional or structural alteration of the kidneys, notwithstanding the decided opinion expressed by M. Cazeaux, Forget, Kennedy and Pridoux.

Condition of Kidneys in Cases of Fatal Eclampsia.—The condition of the kidneys of those who have died from puerperal eclampsia presents some features highly suggestive of the cause of the appearance of albumen in the urine. From the time Dr. Bright wrote his first article in 1827, on the connection between certain dropsical affections and a diseased condition of the kidneys, down to the present hour, much activity has been exhibited by the profession, in making inquiries in regard to the peculiar anatomical and pathological changes existing in the kidneys of persons dying from symptoms resembling those connected with the marked cases of what is now called Bright's disease; while a great variety of views have been expressed upon the subject and many classifications have been entered into, in which entirely different conditions have been embraced, as shown by Virchow, Niemeyer, Rosentine, Aitken, Johnson, Roberts, Dickinson, Stewart Rayer and others, which it is unnecessary for us to minutely discuss.

There are three structural alterations of the kidney, found in those dying from puerperal eclampsia, that have a direct bearing upon the question before us; I refer to that condition of the kidney called by Virchow, hyperæmia, to the parenchymatous degeneration of Rosentine, and the acute desquamative nephritis of Johnson. The character of this paper forbids my entering into a minute description of the anatomical appearances of these three conditions found in the dead house. They present marked differences in their size, color, altered condition of the blood vessels, Malpighian bodies, convoluted tubes, tubes of the pyramids, the cortical and medullary substances, pyramids of Ferrin and Malpighi, as well as their capsules—all of which will be easily recognized upon reference to the works of the aforementioned authors.

Hyperæmia of the kidney always arises from venous, never from arterial congestion, as proved by the experimental ligation of the ascending cava above the renal vein, the direct

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ligation of the renal vein and tying the abdominal aorta below the renal artery in the dog, rabbit, cat and other animals; of course I mean the ligation of these vessels separately and at different times. The other two conditions are found to be inflammatory in nature. All of these have some things in common—the production of albumen, blood casts, fibrinous, (hyaline or waxy) and epithelial casts. I regret that I can find no tables showing the relative frequency of these different conditions of the kidney as found in the eclamptic, but many reasons lead me to believe that the first and second embrace by far the largest number of cases, while acute desquamative nephritis furnishes us the finest examples—the latter condition being acute Bright's disease proper. There are a few cases where Bright's disease existed prior to conception which exhibit those conditions peculiar to chronic Bright's disease, while others owing to serious structural lesions, arising during pregnancy and continuing after parturition ultimately pass into true chronic Bright's disease—the large smooth white kidney being usually found at the autopsy.

Albumen does not generally make its appearance in the urine until the sixth month. There are a few exceptional cases cited—one at the commencement of the sixth week; another by Cazeaux in the fourth month. There are other cases where it appears only after an eclamptic attack or following labor. Owing to its generally appearing late in gestation, it is reasonable to infer that it is caused in many cases by pressure upon the renal veins, or ascending cava, from the developing uterus, which at this time has reached considerable magnitude; it is also found most frequently in primipara, where the abdominal walls play an important part as a resistant element, forcing the uterus back upon the spinal column. Twin pregnancies, an unusual amount of liquor amnii, contractions and deformities of the pelvis—all may give rise to it through pressure.

Causes.—The condition of the blood, and some one of the three conditions of the kidneys herein described, are jointly indispensable to produce albuminuric urine; and, aided often by mechanical pressure, bring about

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in the end, that peculiar condition recognized as albuminuria or uræmia, which lead, in a certain proportion of cases, not numerous, to puerperal eclampsia. We might rest our case here as to the cause of the eclamptic state, were it not for the fact that a certain number of cases of eclampsia are developed without a trace of albumen being found in the urine, or the kidneys after death presenting anything abnormal.

What can now produce these attacks? It would be unwarrantable to conclude that we had an albuminuric or uræmic state of the blood in the absence of all those conditions which are agreed upon as necessary to produce them. If the intimate connection between the uterine nerves and the renal ganglia, as portrayed by Frankenhauser, of Jenna be true, why cannot the uterus from excitation by unusual physiological development (such as in twin pregnancies, an unusually large amount of liquor amnii, pressure as in the primipara, disease, as fibrous growths or mal positions, etc.), reflect an impression so marked upon the renal ganglia coupled with sero-plethora of the blood as to produce eclampsia? Again, manipulation during labor or the mechanical pressure produced by the child's head in dilating and passing through the cervix may prove exciting causes of this disease. We must also remember that there are females whose organization is so delicate and susceptible that the condition of gestation, in connection with chloroanæmia of the blood may, under certain circumstances of great mental depression or exaltation be thrown into eclampsia—not the imitative eclampsia of the hysterical subject, but a disease identical in its results, and often as pregnant with evil as true eclampsia.

Again, where these convulsions are produced from uterine irritation in highly nervous persons, where neither albumen nor casts are found in the urine, and the kidneys bear no evidence of disease, is it not reasonable to infer that the blood has circulating in it some deleterious ingredient or ingredients, which act like urea, but not with the same force, except in highly nervous organizations? Or may it not be urea itself existing in a dilute and masked condition? These are problems which it is impossible at the present time to solve. Let us hope that the day is not far distant, when by

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improved chemistry, a better knowledge of physiology and pathology, and a more accurate comprehension of the microscope in the examination of healthy and pathological specimens, we may obtain data sufficient to arrive at correct conclusions upon this subject. When albumen does not appear until after an eclamptic fit, during labor or after delivery, it is more than probable that it has arisen from temporary congestion of the kidney, caused by the convulsions or from spasm of the glottis with its attending nervous congestion, bringing about the same result. Urea to be poisonous must have been retained in quantities in the blood for more than twenty four hours.

The following conditions may be considered as *predisposing causes* of convulsions in pregnant, parturient and lying-in women; Albumenuria, hydræmia or chloro-hydræmia, uræmia, heredity and primipary. As to the atmospheric causes alleged to exist by Prof. Barker and others, it remains an open question yet to be decided.

The *exciting causes* of puerperal convulsions are varied and numerous. In persons of exalted nervous sensibility when albuminuria, uræmia or hydræmia exist, all causes producing marked irritation upon the nervous system may produce convulsions. Indigestion, constipation, retention of urine, the irritable conditions of the uterus previously mentioned, reflex pains and moral shocks are attended with like results. Where the convulsions appear after cerebral or renal congestion, physical prostration brought about by the pains of labor, especially where the labor has been protracted or where instrumental interference has been demanded—these are to be considered additional causes. The accumulation of urea in the blood from renal congestion, cerebral congestion, the sudden alteration of the circulation from the expulsion of the fœtus, and the contraction of the uterus, coupled with the relaxation of the abdominal walls may all produce convulsions.

Having studied the causes that give rise to puerperal eclampsia let us proceed to examine the *symptoms and complications of the attacks.*

Symptoms.—By the term puerperal convulsions, is meant

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an affection characterized by a series of convulsive attacks, in which nearly all of the muscles of volition as well as many of organic life are involved, and which are accompanied or followed by more or less complete suspension, for a varied time, of the sensorial and intellectual faculties. I will not attempt to describe the number of diseases which have been classed with puerperal convulsions when occurring in the pregnant woman, but shall confine myself to a description of the disease proper, and will then deal with those which bear some resemblance to eclampsia, distinct, however, in their nature, and occurring most frequently in unimpregnated females.

The symptoms of this affection are best classed as premonitory, those which occur during the attack, and those which may be developed in the intervals.

Precursory symptoms do not by any means constantly manifest themselves. We have from M. Weiger the statement that where convulsions appear prior to labor, forty per cent. of the cases will have these symptoms; during labor thirty per cent. will have exhibited these manifestations; following delivery, twenty per cent. These symptoms are variable in duration, sometimes appearing for several days, again manifesting themselves but a few hours before the attack. The patients frequently appear to be nervous and agitated, suffer from malaise, are impatient and irritable, easily excited, have attacks of dyspnœa, but above all, suffer from a peculiar kind of headache occupying at one time the frontal region; again the back of the head is alone affected, or one-half of the head, or some one centralized point may be the seat of the trouble. The pain in the head is generally continuous, occasionally intermittent, differs in degrees of intensity and is rebellious to treatment. It is frequently accompanied by constitutional disturbances, such as nausea, vomiting, tinnitus aurium, dimness of vision and vertigo—so say M. Chaussier and Denman. After these symptoms have lasted for some time, one will be surprised at the alterations taking place in the appearance and behavior of the patient. She often becomes lethargic, indifferent to her surroundings, has a "fixed" expression of face, is in a state of abstraction, fails to compre-

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hend questions addressed to her, and, frequently, answers incoherently. The vision becomes more imperfect, everything being enveloped in a mist, or sometimes but half of an object is seen, or total blindness may ensue from fatty degeneration of the retina. Again, patients may have sparks emitted from the eyes, forming corruscations of light. The hearing is often impaired, and the tinnitus aurium annoying. Local or general œdema may have set in, and now, if the urine is examined, you are apt to find both casts and albumen.

Convulsions.—At last nervous tension reaches its utmost limit of endurance and an eclamptic explosion takes place, which has been so well described by Prestat, whose outline I adopt, taken from Cazeaux. The expression becomes suddenly completely fixed, and there is a moment of general immobility; the muscles of the face undergo rapid but limited movements, contract in a thousand ways, their action becomes more and more marked as may be seen through the skin. The features are greatly altered and drawn in every direction. The eyelids are constantly in motion, and, through their half open apertures, the eye-balls are brought into view and roll in the orbit in every direction—finally becoming fixed in one position. The pupils are dilated and immovable. The muscles of the alæ of the nose contract and give to its tip a pointed expression. The lips are in continuous motion, and the mouth is drawn to the same side as the eyes—these having followed the direction in which the head is twisted. The mouth being partly open, permits the tongue to protrude, which, excited by irregular movements, is often thrust forward between the dental arches and is consequently severely bitten or bruised. The contraction of the muscles of the face, the pointed condition of the nose and chin, the fixation of the eyes give the face an expression which, once seen, is never forgotten. Soon the voluntary muscles of the body become affected; their movements are constant—the muscles of extension overcoming those of flexion, the limbs are more or less extended. Often the muscles of one side of the body contract more than the other, twisting the body in the same direction as the face. One of the arms is frequently raised as if the patient was endeavoring to ward off a blow.

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The fists are clinched and the thumb usually lies in the palm of the hand, beneath the fingers or between the index and middle finger. There is no disposition to toss or move in the bed, owing to the rigidity of the limbs—the patient remaining relatively in the same position. Respiration is interrupted, noisy, with irregular inspirations and stertorous expirations, froth collects in the air-passages and is ejected from the nostril and mouth at each expiration, often tinged with blood, where the tongue has not been properly returned to the mouth and has been bitten. The face, at first pale, soon becomes markedly congested, to be quickly followed by congestion, the surface of the rest of the body. The jugulars, owing to contraction of the muscles of the neck, stand out prominently; the carotids beat with great violence. The jaws become fixed and thus the tongue is frequently bitten. The intense congestion is caused by the asphyxiated condition of the patient. This congestion is most marked in type, and arises from a combination of causes—the contractions of the larynx, of the chest, including the diaphragm, of the neck compressing the jugulars; possibly the heart may participate in this general muscular contraction. Certain muscles of organic life become active and we have, in consequence, the escape of urine, expulsion of fæces, and, frequently, the ejection of the contents of the stomach. The sensorial and intellectual faculties during the attack are entirely suspended. There is a total absence of sensibility—the patient not feeling the most intensely painful application to the skin; even a hot iron applied would fail to make the least impression. The pulse at first is full and hard; but as the attack progresses it often becomes small and frequent—sometimes intermittent; again it is imperceptible in the radial artery. The skin at the commencement of the convulsion is hot and dry, soon to become moist—the perspiration becoming profuse as the fit subsides. The convulsions do not suddenly terminate; on the contrary, there is a gradual subsidence of the symptoms; the respiration becomes more and more regular and full, the muscles less convulsed, until finally contractions take place at marked intervals. The pulse once more becomes slow and full, sometimes returning

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to its normal standard; there is a gradual subsidence of the congestion of the integument, without, however, total abolition of the lividity. The uterus may or may not be influenced by the convulsions; sometimes it contracts violently and labor is expedited. Again it appears almost in a state of inertia—taken by surprise, as it were, or the contractions may go on as in natural labor. Cazeaux says the cervix during convulsions generally dilates slowly, the neck, participating in the convulsions, taking on spasmodic action. The attack does not accompany each pain but is liable to be coincident with one, the explosion being brought on by the uterine contraction; sometimes there is an appreciable interval between the contraction and the explosion. If the urine be drawn during the attack, it will generally be found small in quantity, of a smoky, dark color, and loaded with albumen, (it has been known to solidify under heat). There is sometimes absolute suppression, and, in both conditions, the bladder will be found much contracted. The emotional faculties, when the attack comes on during labor, are greatly disturbed and appear almost hysterical in their character; the patient laughs and weeps alternately, is greatly agitated and intractable, often passing from this state into one of hebetude and stupor.

The number of convulsions varies widely, anywhere from one to sixty; they quite often come on in groups of two, four or more—that is, the patient may have two with an interval of half an hour between them; then after six, twelve or eighteen hours, have two more, and so on; there is no regularity in this matter. The fits often follow each other in rapid succession, the patient not coming out of coma except to pass into another convulsion.

The duration of the convulsions is variable. They last from one to eight minutes. The first attacks are usually short, lasting from one to two minutes; they are most generally violent, the attacks grow longer as they gain in frequency.

During the Intervals.—The condition of the patient varies much during the intervals. Generally in the first few convulsions the intervals are quite long and the patient soon

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comes out of either somnolence or coma, as the case may be. Upon opening her eyes she will be entirely unconscious of what has transpired and will be greatly surprised at the condition of her surroundings, not being able to comprehend the behavior and nervousness of her friends. After a short time she commences to recover her faculties, and soon resumes her accustomed mental state. As the attacks grow more frequent the intervals become shorter and shorter until finally the patient lapses into a state of profound coma, arousing only to pass into another fit.

While in this comatose state the intellectual faculties are wholly in abeyance; the pulse is slow and full, the pupils are dilated and insensible to light, the face is livid, the respiration stertorous and the limbs flexible. Sensibility may or may not be entirely lost—generally it is partially retained; the patient frequently, by the expression of her face and by her groans, indicates suffering during uterine contraction, and evinces discomfort when handled or pinched. The cause of this coma is unquestionably attributable to cerebral congestion, brought about by the asphyxiated condition of the female during the first part of the convulsion. The coma *gradually* passes into somnolency from which the patient may be aroused; the several faculties slowly return. Upon recovering her consciousness she will experience fatigue and exhaustion, her nervous functions and vascular equilibrium being by degrees restored.

Terminations.—Eclampsia terminates in recovery, death, or is followed by some resultant disease. When the patient is to recover we have longer intervals between the fits, and a gradual amelioration of all the symptoms. Death results from frequent and prolonged attacks, the convulsions lasting several minutes and the coma becoming more and more pronounced. There are other cases where the patient dies at once, at the commencement of the attack from asphyxia. Again, why should there not be cases, as M. Arran suggests, where death may ensue from sudden arrest of the heart? Asphyxia and profound coma are the two conditions to be most dreaded, especially the latter. In those cases which recover, the intellectual and sensorial faculties

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require more or less time for recovery, in proportion to the amount of impression which has been made upon the nervous system, as a rule the fewer the number of convulsions and the shorter the duration, the more rapidly will hearing, vision, and memory be restored. The memory sometimes remains either permanently impaired or destroyed. Cazeaux and Prof. Barker both cite peculiar instances where defect of memory resulted.

There are certain conditions following an attack that are to be considered as direct resultants of the convulsions. The congestion of the brain during an attack may have been so great as to rupture a blood vessel and give rise to an *apoplexy* with an attendant hemiplegia, or we may have an attack of *congestion of the lungs; meningitis* is mentioned by Cazeaux as another attendant, and *peritonitis* by Madame La Chappelle.

Pathology.—There is but little to be said in regard to the pathology of eclampsia beyond what I have stated when discussing albuminuria, the true pathological condition being an altered state of the blood and the structural lesions found in the kidney, one or both; for, while it is true that either condition can produce eclampsia, they are generally found coöperative agents one with the other.

Where serum is found in the cerebral ventricles or arachnoid cavity, it is to be ascribed to congestion of the vessels of the pia mater and of the brain, produced during the convulsions. Apoplexy following a serous effusion upon the surface of the brain or a hemorrhage into the brain substance arises in either condition from a true secondary lesion. In the lungs, we are liable to find more or less congestion, occasionally, active hyperæmia—the fluxion of Virchow, without producing inflammation.

Diagnosis.—Eclampsia is to be distinguished from epilepsy, tetanus, catalepsy, chorea, hysteria, concussion and compression of the brain and apoplexy.

From *epilepsy*, it is difficult to make a diagnosis in a case when first seen without a previous history, as the symptoms of the attacks are almost identical—eclampsia even, in a limited number of cases, having the aura. In epilepsy you

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are not generally liable to have more than one fit in a day and, by inquiry, a previous history can usually be obtained. Again, epilepsy is not often followed by coma. An examination of the urine may aid in diagnosis by giving casts and albumen, the usual accompaniments of eclampsia.

The continued rigidity of the muscles of the extremities, and the retention of the mental faculties in *tetanus*, should carry in themselves the diagnosis.

In *catalepsy*, we have the peculiar feature of the limbs remaining in whatever position they were when the patient was seized; we also possess the power of placing the limbs in any position we may desire, and they will thus remain until the termination of the cataleptic attack.

Chorea-gravidorum is an aimless, spasmodic movement of single, or groups of muscles. The convulsive movements, though often violent, are but partial in the upper and lower extremities, and they generally appear at the same time each day. The intellectual faculties remain intact, consciousness never being suspended. Chorea continues indefinitely during gestation and is not usually relieved until abortion, premature or natural labor empties the uterus.

The differential diagnosis from *hysteria* is often not so easily made as we would desire; for, in eclampsia, moments are valuable, and we should arrive at correct conclusions at once. Hysterical manifestations vary according to the time of gestation that they make their appearance. During the first four months, they are usually mild, there being weight and oppression of the chest, disposition to laugh or cry, and globus hystericus from spasm of the glottis. In addition to the above symptoms, we may have cough, dyspnœa, opisthotonos, anæsthesia or hyperæsthia of the skin, and convulsive movement of the limbs. In the second half of pregnancy, we are liable to have more permanent nervous phenomena as hysterical paraplegia or paralysis of some one or more of the extremities, which, however, never correspond exactly with the symptoms of these conditions when they appear in the other affections or in pregnancy uncomplicated with hysteria. They are generally transient and are relieved by parturition. There is also this marked difference between eclampsia and

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hysteria:—in the latter, while in a convulsive state, consciousness and perception are never entirely lost, and we may have either anæsthesia or hyperæsthesia; there is always more or less intolerance of light, and the patient passing into a convulsive tetanic or cataleptic form of attack gives way to general emotion, and announces its consummation by a piercing shriek. The urine is large in quantity, limpid, free from albumen and casts, and usually contains sugar.

Where a patient has passed into eclamptic coma, this condition may be mistaken for *apoplexy*; but when we remember that the attack was preceded by convulsions, which is not usually the case in apoplexy, that the extremities are flaccid and motionless, and there is a general loss of sensibility, that the patient is not hemiplegic and the pupils are always dilated and insensible to light, there will be no great difficulty in the way of diagnosis. Where hemiplegia follows serous effusion —a secondary complication of eclampsia—it would be almost impossible to make the diagnosis without a knowledge of the previous history, when all doubt would at once be dispelled.

Convulsions from blows or falls would convey to our minds immediately the possibility of *concussion or compression*. Finding marks of injury, or, even in their absence, where we were confident the patient had received a blow upon the head, or had fallen from a height, and there had been no previous convulsions, we would feel justifiable in making a diagnosis of one or the other of these affections.

I remember well a case where a party had received a blow over the squamous portion of the temporal bone producing fracture and depression. Convulsions were frequent, the coma marked and continuous, and had these symptoms occurred in a pregnant woman, without a knowledge of the previous injury, diagnosis would for the time being have been impossible. This patient was relieved almost instantaneously upon my trephining and raising the depressed bone.

[TO BE CONTINUED IN JUNE NO.]

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ART. II.—**A Case of Intestinal Obstruction, Caused by Attachment and Strangulation of the Vermiform Appendix.** Reported with Notes, By E. H. BENNET, M. D., of Lubec, Me.

S., æt. 65, mechanic by occupation, has always been a healthy man. He denies ever having had any venereal disease, and no indications of it are to be found.

Sometime in 1878, he found an enlargement in the right inguinal region which caused him no inconvenience and attracted but little attention. He is not certain whether it was there constantly or only by times, but it never has been painful. He has suffered at different times from moderate attacks of pain in the hypogastrium.

On February 9th, 1881, he was seized with violent pain in the same region and supposed he would suffer as before. He never thought the swelling in the groin had anything to do with causing the pain.

After suffering about two hours, he sent for his family physician, Dr. L. P. Babb. When examination of the abdomen was made, a lump, the size of a small lemon, was found in the right crural region. It felt like an enlarged gland; it was neither painful nor tender to the touch. Fearing it might be a *rupture*, attempts at reduction were made, but without success. Morphia and atropia were given hypodermically and followed by relief. No return of the pain occurred until the next morning when the same treatment was repeated with a similar effect. During this time, large enemata had been used, but failed to produce any action of the bowels.

Physic was now ordered, but only followed by a return of the pain, accompanied by vomiting. During the afternoon of the second day the tumor became more elastic and the suffering was less acute.

Dr. Knowles, of Calais, was asked to see the case in consultation, and did so at 11 P. M of the 10th. After a careful examination of the patient and trial of the taxis, he considered the diagnosis uncertain. As the indications for surgical interference were not *apparently* urgent—the pain and vomiting not being troublesome at this time—it was thought best to wait, and, in the mean time, endeavor to act on the bowels by mild cathartics. The second attempt with physic was no more successful than the first, but produced the same unpleasant symptoms—*i. e.*, pain and vomiting.

During the next day (11th), the vomiting became stercoraceous, after which it was thought best to *operate* and give

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the man the benefit of the doubt. Surgical interference would have been resorted to much sooner had the attending surgeons been able to convince themselves that the tumor contained either bowel or omentum. The feel of the tumor was everything but convincing, and it was quite rational to suppose that internal obstruction was the true cause of the serious symptoms which presented themselves. When an operation was decided upon, Dr. Wood and the writer were called in to assist, it being done at 2 P. M. on the 12th.

A large quantity of stercoraceous matter had been vomited during the morning. No nourishment of any consequence had been retained; and the patient was exhausted, had a haggard countenance, feeble pulse and cool extremities. Antiseptic precautions were observed as far as practicable. Dr. Knowles operated. When the incisions were made, it was found that the coverings were so matted together by inflammatory action that they were practically inseparable. No distinct sac was found; no fluid escaped. The strangulated portion having been reached, it was found to be *gangrenous*, and neither intestine or omentum, but the free end of the *appendix vermiformis*.

The stricture was readily relieved without cutting, when, if permitted, the whole would have readily passed back into the abdominal cavity. The appendix occupied the femoral canal. Gimbernat's ligament could be felt to the inside; the femoral vessels to the outside, and Poupart's ligament in front. The blackened tissues extended back some six cm., beyond which they seemed healthy. A silk, carbolized ligature was tied around the appendix, above the diseased tissues and the gangrenous portion. The ligature was brought out through the wound, which was closed by interrupted sutures. After recovering from the anæsthetic, the patient vomited a large quantity of extremely offensive matter; this proved to be the last of the vomiting.

Nothing worthy of special note happened during the after-treatment. An occasional enema kept the bowels in good condition.

Tonics and stimulants were used throughout. At the end of four weeks the wound had healed.

After the third month the patient resumed his work as painter (in doors), and during the following summer worked on the outside of buildings, standing for hours on a ladder, and showing his usual vigor. At the time of this writing he is enjoying good health, without any sign of return of the old trouble.

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REMARKS :—*Diagnosis.*—The first difficulty met with in this case was a question of diagnosis. The symptoms of obstruction were present; but, was the true cause of them not *within* the abdominal walls? The condition of the tumor did not furnish sufficient evidence to warrant a diagnosis of enterocele, epiplocele or enteropiplocele. It was hard, somewhat globular in shape, and could be nearly encircled by the fingers.

When speaking of the diagnosis of hernia, Gross says :* "The lymphatic glands at the upper and inner part of the thigh, are liable to enlargement—both acute and chronic; and numerous instances have occurred of errors of diagnosis between this disease and femoral hernia, a rupture having been laid open for a supposed abscess, and an inflamed ganglion treated as a rupture." When this is true of femoral hernia, it is evident that the difficulty will not be lessened in such cases as the one under consideration."

The same author says further: (p. 523). "The chief difficulty in regard to the diagnosis of strangulated hernia arises from the circumstance that there is occasionally no external tumor at all; or, if a tumor is present, it is impossible to determine whether it is a hernia, an incipient abscess or an inflamed lymphatic ganglion."

According to S. O. Habershon,† hernia, external or internal, and intussusception from any cause, may be confounded with enteritis arising from simple inflammation.

Warren ‡ in the second edition of his work gives a "diagnostic table," where very much valuable information can be found in a thoroughly condensed form. He also describes (p. 216) an improved aspirating needle which may aid us in diagnosing certain cases.

In such a case as ours, and perhaps in the majority of doubtful cases, a carefully conducted operation would do more towards clearing up the diagnosis than all other means combined; and in these days of successful abdominal surgery, such an operation should not add much extra risk—even if no positive conclusions be reached.

**System of Surgery.* Vol. II. p. 552. (4th Ed.)
† *Diseases of the Abdomen,* 2nd Am. Ed., p. 283.
‡ *Practical Treatise on Hernia.* p. 78–81.

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Cause of Strangulation.—This must have been caused either by traction on the cæcum through the appendix or by the latter acting as a diverticulum.

"Occlusion by traction* may occur when meteoristic intestinal loops become engaged under the terminal ligament; and although not themselves strangulated, stretch the ligament to such an extent that the lumen of the intestine becomes closed at the point of origin of the diverticle. The obstruction of the intestine increases the meteorism, and this, in turn, increases the traction."

We have no means of ascertaining exactly how long the appendix had occupied its abnormal position. In a conversation with Dr. J. H. Warren, of Boston, on this point, he expressed the opinion that it was *probably* congenital. Adhesions had fixed it there; so some recent changes must have taken place.

"The appendix," says Habershon,† "is sometimes five or six inches long, and perfectly free in its movements. It may be free among the coils of the small intestine, or in other cases it becomes adherent to the brim of the pelvis, to the parietes of the abdomen or to the mesentery. In this way loops are formed, which in many cases become the cause of fatal internal strangulation, a portion of small intestine passing beneath the band thus formed."

Leichtenstern records that,‡ "the appendix vermiformis repeats the same processes of strangulation that we have seen caused by diverticles. According as its free end becomes attached to the cæcum, ileum, ovary, etc., bridges, rings and arches are formed which may lead to strangulation." The same author states that "strangulations by diverticulums and by the vermiform appendix are much more frequent in males than in females, owing to the greater frequency of inflammation and consequent adhesions of the appendix in males.

Dr. Pike, of Iowa, refers to a case § where "the appendix

Ziemssen's Cyclopædia. Vol. VII, p. 539.
†*Diseases of the Abdomen.* 2nd Am. Ed., p. 318.
‡*Ziemssen's Cyclopædia.* Vol. VII, p. 540.
§ *Medical News.* July 1st, 1882, p. 22.

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vermiformis was found adherent to the vertebral column, and a loop of the bowel constricted by it."

When shall we operate for strangulated hernia? On this point surgeons differ very much; but the weight of evidence is in favor of operating *early*, as may be seen by the following quotations.

B. B. Cooper* makes the following statement:—"There is no question in surgery more difficult than to decide upon the proper moment at which the operation for strangulated hernia should be performed." The opinion of this author alone is sufficient to show that the subject demands very careful consideration. It is needful that we should know about how long to employ taxis, and when we should resort to other and more certain measures.

Prof. Gross,† teaches the following in reference to femoral hernia:—"The length of time during which the taxis should be persisted in must, of course, be influenced by the circumstances of each particular case. It is of the greatest practical moment to remember that the symptoms here are always, other things being equal, much more urgent than in strangulated inguinal hernia, and that mortification occasionally takes place within less than twenty-four hours after the occurrence of the accident. Time, then, is a matter of immense consequence in nearly all cases of this description."

In some cases,‡ gangrene or ulceration comes on almost as soon as the strangulation. M Larrey saw this happen at the end of two hours; Richter at the end of eight and Lawrence at the end of twelve."

At the Hospital of Orleans § where the operation was performed at the beginning, Le Blanc rarely failed of success; while at Paris, when it was not decided upon until at a late period, most of the patients died; so that Richter was induced to proscribe the taxis.

Bryant says‖: "The taxis should never be employed for any lengthened period. With the patient under chloroform,

Lectures on Surgery, p. 486. 1851.
†*System of Surgery*. Vol. II. p. 553, 1866.
‡*Velpeau's Operative Surgery*. Vol. III. p. 571.
§ *Velpeau's Operative Surgery*. Vol. III. p. 568.
‖*Practice of Surgery*, p. 316.

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a femoral hernia of average size,—that of a walnut—should never be manipulated for more than two minutes; half that time or less is usually sufficient to effect reduction when it is to succeed; any more prolonged effort will be injurious; it should never be forcible. In large femoral hernia, inguinal or umbilical, five minutes may possibly be allowed: but the quarter and half hours manipulation that is too frequently talked about is dangerous in the extreme.

When the taxis has failed, nothing is justifiable but an immediate operation. The operation of itself is not dangerous, although the condition that demands it is exceedingly so."

Prof. F. H. Hamilton says*: "that more lives have been lost by *delay* than by *too early* resort to the knife. Nevertheless, it is not quite certain, but this maxim would have been reversed if delay did not usually imply *violent* and *prolonged* taxis."

Prof. Wright,† in his lecture on strangulated hernia, said: "Do not use forcible taxis; there is danger of increasing the congestion, inflaming the intestine and forcing the whole mass back, with the stricture *in situ*. If you can relieve by taxis, you can do it in *two* or *three* minutes, unless it be a very old case. Do not look upon herniotomy as a dernier resort. The danger is not in the operation, usually, but in waiting and allowing the proper time for operation to go by. If we could reduce all cases in twelve hours after the first symptom, there would be but few fatal cases—even if herniotomy be needed in every one. Before giving the anæsthetic, prepare for the operation, so that you may perform it at once if the taxis fails."

According to Cooper‡: "When a very tight stricture is indicated, the operation should be performed without even attempting a reduction by means of the taxis."

Mr. Hey, after having performed the operation thirty-five times said §: "I have often had occasion to lament that I

**System of Surgery*, p. 724.
†*University of City of New York*, Dec. 20th, 1881.
‡*Lectures on Surgery*, p. 486.
§*Practical Observations*, p. 143.

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had performed it *too late*, but never that I had performed it *too early*."

Dr. W. A. Byrd, of Quincy, Ill., expresses the same sentiment in an admirable essay of his,* entitled "When to Operate for Strangulated Hernia."

"There are persons," says Petit,† "who boast of reducing all descriptions of hernia. They compress, destroy and inflame the intestine, and I have always had recourse with repugnance to the operation in patients who have been subjected to such trials. Pott recommends that we should not wait over two hours, and from the time when he adopted this prompt course, almost all his patients were cured; before that he lost half of them."

Says Anderson‡: "I know of no excuse that would apologize for the delay which we generally witness before this operation is resorted to, or which would authorize the surgeon who is to be operator in allowing half a dozen consultants to take their turn in squeezing the tumor under the pretence of giving full trial to the taxis."

M. Verneuil§ lays down the following useful principles respecting femoral hernia.

1st. Irreducibility, with symptoms of obstruction, is almost always due to true strangulation.

2nd. The taxis and other modes of reduction almost always prove insufficient.

3rd. Early operation without the preliminary administration of purgatives, and preceded only by a very moderate application of the taxis, offer very good chances of recovery, when the strangulation is not old.

Warren advises that‖: "The surgeon should make gentle manipulation upon the tumor for from *two* to *five* minutes, when, if reduction be not affected, he should try the application of cold to the parts," in the form of "ice," "a small stream of ice water;" or if not successful with these, "sul-

Richmond and Louisville Med. Jour. Jan. 1877.
†*Velpeau's Operative Surgery.* Vol. III., p. 568.
‡*Surgical Anatomy.* p. 258.
§*British and Foreign Med. Chir. Review.* Vol. XXIX.
‖*A Practical Treatise on Hernia.* By Dr. J. H. Warren. 2nd Edition. p. 209. 1882.

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phuric ether." These means should be followed by *gentle* taxis. "The taxis should be continued at intervals of a few minutes for from thirty minutes to three hours according to the alarming symptoms, the condition and vitality of the patient, and the length of time since the hernia became strangulated. He further states that: (page 211) "From the observation of many years, I am convinced that the taxis is often too long continued before resorting to the operation of kelotomy, and I feel as confident that thousands of lives that are lost might have been saved by employing this operation in due season."

Enough has been quoted to show the opinion of good and recent authority.

No certain rule of action can be laid down for all cases of strangulated hernia. Each case must be studied by itself and treated according to its own merits. Whatever course will afford the patient the best chance for recovery is the one to be pursued.

There are practitioners even at the present day, who pronounce the case hopeless when forcible taxis and other auxiliaries fail, as the following will show.

A short time ago, a friend of mine, Dr. Fitzmaurice, of Houlton, Me., was called in consultation to see a case of strangulated inguinal hernia. The taxis, purgatives, enemata, etc., had all been faithfully tried. After examining the case, and without renewing the manipulations, he advised an operation; notwithstanding the patient lived in a camp, and the only light attainable came through a few squares of glass. The physician in charge objected, saying that the friends, not understanding the nature of the case and its risks would blame them in case the woman died *after* operation. At the same time he believed that she would die unless relieved. He was told that this was not true surgery. The case was fully explained to the relatives and the *patient*. They agreed to take the chances. The operation was performed, and the mother of a large family (twins three weeks old) is spared to her children.

These remarks are not by any means intended as *criticism* on the management of the first case.

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ART. III.—**Pneumonia—Especially its Cause and Treatment.***
By GEO. W. HUNTON, M. D., Warrenton, Va.

Pneumonia is inflammation of the lung or lungs. Most authors claim that it is a self limiting disease, and terminates by crisis. It is termed lobar, lobular or vesicular pneumonia, according to the portions of lung affected. The *lobar* pneumonia, of Wood, is the croupous pneumonia of the Germans, and the fibrinous of the French. The *lobular* pneumonia of Wood is the catarrhal of writers of the present day. Other classifications have been made, but it is unnecessary here to refer to them.

Etiology.—I am not aware that any author who wrote during Wood's time differed with him as to the cause of pneumonia. To cold alone, or to cold and moisture, were attributed all cases of the disease, except those of traumatic origin, or due to inhalation of certain gases, or excessive straining of the voice, etc. But we now know that, in addition to such causes as just mentioned, even in-door life, a vitiated atmosphere of almost any kind, alcoholic excesses, and bad hygienic surroundings generally, which indue debility and favor the development of the disease. Pneumonia sometimes prevails to such an extent in some special neighborhoods as to give rise to the suspicion that it is a zymotic disease. Webster Prentiss, of Washington, D. C., says: "Manifestly, if it is an endemic disease, due to a specific cause; and if the lung affection is a local manifestation, it should be classed with the zymotic diseases—especially that which is called croupous pneumonia."

Microscopists have made important discoveries of lung organisms or animalcula in the air. The discovery of the condition of the air we breathe gives promise of great practical value. We are bathed in an atmosphere which is sometimes densely populated by minute, vigorous organisms, which we inhale and swallow—animalcula which are microscopic and sub-microscopic in size. These may occupy the air-passages and may cause pneumonia, bad colds, epizooty

*Read before the N. E. [Va.] Medical Society.

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and like diseases. Certain authors think some classes of bacteria are innocent towards man, but seriously affect lower grades of animal life. Some animalcula prey upon the human body, or enter by the air passages and produce disease. Some are probably friends in disguise to man—preying upon and destroying germs of disease as they float on the atmospheric wave, which might have been carriers of death.

I made observations connected with the changes of weather in this section of the country during the months of January and February. Much ice was harvested in January; but there were also many warm and foggy days, with rapid changes to cold weather, both in January and February. Most authors would have said that such was the kind of weather for pneumonia. But so far as I could learn, there were comparatively few cases of pneumonia, bronchitis or bad colds in January and that part of February referred to. And contrary to expectation, as the weather cleared up and the season became milder, these very diseases began to prevail. Here we see that what are usually considered the usual causes of pneumonia, bad colds, etc., viz: cold and changeable weather, with rapid and marked variations of moisture—failed to produce the diseases spoken of, and that in reality the reverse was true. Was the condition of the weather first alluded to unfavorable to the germination, development and migration of bacteria colonies? We are not yet acquainted with the origin, wants or habits of these animalcula. But in view of the record, is it not probable that these bacteria were the producers of the epidemic of pneumonia, bronchitis, bad colds, etc, which did prevail as soon as the weather began to "break," and continued through March?

Laennec divided the *pathological conditions* into three stages: engorgement, red hepatization, and grey hepatization. Bartholow and other writers of to-day adopt Jaccoud's arrangement into the stages of hyperæmia or engorgement, of exudation, red hepatization, resolution or degeneration and exudation, and of purulent transformation or grey hepatization.

Treatment.—When I commenced practice, I was fully persuaded that the antiphlogistic plan was the proper one. I

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remember well my first case of pneumonia. He was a robust, hard laborer, aged about 25 years. By the rational and physical signs, I readily diagnosed pneumonia in its early stage—before exudation. Anxious parents, brothers, sisters and friends stood around to see what the strange young boy-doctor would do. It was the time to test my knowledge, skill and pluck. I corded the arm, arranged a vessel to receive the blood, and bled the patient while in a sitting posture nearly to syncope—taking about twenty ounces of blood. I followed up this treatment with an active purge by calomel and jalap, with sedative and diaphoretic doses of tartarized antimony. In forty-eight hours, I bled again, kept up the antimony—increasing the dose every hour until he could bear as much as one grain every hour. Then followed cupping and blistering. After some days of this treatment, I began to feel the responsibility to be too heavy. You can realize how much pleased I was with the consulting doctor, with my treatment and with myself, when my course was approved and continued. The patient made a good recovery.

But since that early day in my professional life, some change has taken place either in the disease or in the human system which renders such heroic treatment at this time irrational and *generally* unsuccessful. In this age, if the case is seen in the *congestive stage*, I am usually able to cut the disease short with one or two doses of fifteen grains of quinia, with about a fourth grain of morphia sulphate, and two drops of tincture of aconite root, repeated every two hours, *pro re nata*. Mustard poultice should be applied to the chest, and removed when the skin becomes reddened. The feet ought to be put in a hot bath. When the quinia and morphia have been absorbed, an active purgative should be administered to help diminish abnormal blood pressure. The tincture of aconite root, or the more powerful tincture of veratum viride may be given with undoubted good effects, during congestion, in a robust subject.

But I believe most authors agree that these, and all other sedatives, cease to be useful, and are, indeed, injurious, when exudation has resulted. During this stage, the temperature

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is high, and it is necessary to restrain it. Jurgenson, who assumes pneumonia to be a specific disease, like typhoid fever, maintains the necessity of antipyretics. And in his estimation, the cold bath comes first, and exercises a favorable influence over the progress of the disease.

In a very interesting talk with my esteemed and intelligent friend, Dr. Burrel, of Gerard street, Philadelphia, a short time since, upon this subject, he told me he had recently been to Clarke county, Va., his old home, to see a brother who was very ill of pneumonia. The physician in attendance had used very large doses of quinine as an antipyretic, but had failed to reduce the temperature. The thermometer had for days persistently and obstinately stood at 105½°, unaffected by the remedies used. Dr. Burrel said he felt the necessity of doing something to reduce the fever, and advised the use of the cold bath. He knew the prejudice existing against cold bath in pneumonia and felt the responsibility, but knew it was *the* remedy, and risked his reputation on it. So he locked the door, and with the assistance of the attending physician, put his brother into a bath at a temperature of 80° F., and reduced the temperature by pieces of ice to 50°. He was in the bath fifteen minutes. The temperature was reduced in that time from 105½ to 103°. In twelve hours, the thermometer showed the fever again on the increase. The patient was put in the bath again, and the temperature of the water reduced as before from 80 to 50°, remaining in, as before, fifteen minutes. The heat of the body was brought down to 100°, and continued to fall until, in twenty-four hours, it was normal, and his brother made a good recovery.

Now, there was rational and successful treatment. Heat was overcome by bringing it in antagonism with cold. The heat or caloric of the body was given off to the cold water—to equalize the temperature of body and water until the temperature became near normal, and then the patient was taken out.

In *Braithwaite's Retrospect*, June, 1880, Dr. C. W. Carpenter gives his experience with the use of the hot vapor bath to reduce fever—the plan of elimination, instead of neutrali-

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zation, as by Dr. Burrel. He puts his patients into the vapor bath and increases the heat to from 85 to 100°, and keeps them in as long as two hours, thus removing the congestion and relieving the difficulty in breathing, the cough and pain, and stopping the expectoration of blood. He says "he can't remember when he lost a case of pneumonia;" and claims that he has learned that if the skin is properly attended to, it will call so much blood to it, that congestion will be almost impossible.

Now, here, I have presented two remedies in the treatment of pneumonia, which are entirely in antagonism—one the plan of elimination; the other, neutralization. You find other medical men pursuing something of a middle ground, and use the wet pack to get rid of the abnormal amount of heat. And it is a most excellent means by which to reduce the heat. If you will take a sheet and dip it in cold water, lay it on the bed, put your patient on it, wrap him in it, you will, in a few applications, reduce the temperature as much as desired. It is important that the room occupied by the patient be not too warm, but rather cool, and not varying from one degree of temperature to another.

We will conclude by quoting Dr. Hamilton, of Edinburg, and McSherry, of Baltimore, on pneumonia, which completes the circle by bringing us back to the *lancet*. Dr. Hamilton says: "Notwithstanding all that has been said to the contrary, and in spite of the prevailing fashion of the present day, I believe that venesection *is the one* sovereign remedy for pneumonia. To any one who has, like myself, repeatedly seen the instantaneous relief afforded by the abstraction of blood in this disease, the conviction is irresistible, that physicians have let a practice of the utmost importance and value fall into disuse. He believes that, in venesection, we have the one means of lowering the blood-pressure and cutting short the disease. He goes on to say, that when once the undue blood-pressure has been relieved, the exudation of its solid constituents must cease, and time will thus be afforded for the circulation of the part to recover itself. The hard, wiry pulse of a person suffering from croupous pneumonia, simply expresses the high tension of the blood. Remove

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part of the blood, relieve the tension, and you will cut short the disease. He winds up by saying: "*The great* mistake which has been made in the practice of venesection is that of employing it in the wrong kind of pneumonia; that is, in catarrhal types."

In a conversation with Dr. Baldwin Day, our popular and worthy townsman, who has recently graduated at a Baltimore college, he told me that Prof. McSherry had expressed in his lectures the belief that we ought more often to use the lancet, and that we might expect in a few years venesection would again, as formerly, be *the popular* remedy in croupous pneumonia and other inflammatory diseases.

The well-informed, discriminating physician desires only to know the action of remedies to intelligently apply them to the disease he has diagnosed. To follow any plan of treatment, is to be a routinist.

The object of my paper is to excite thought and inquiry.

Clinical Reports.

Case of Abortion in the Early Stage of Pregnancy presenting some Anomalous Features—Dangerous Ante-Partum Concealed Hæmorrhage. By BEDFORD BROWN, M. D., Alexandria, Virginia.

During the month of January last I was called to see Mrs. T., a young married lady, then on a visit to friends in this city from a neighboring county. I found the patient presenting an extremely anæmic and exsanguined appearance. The frequency of the pulse was very great, it being then one hundred and thirty to the minute. In connection with this state, the patient suffered from excessive general prostration.

She informed me that three weeks previous to my visit, while at her home in the country, she had sustained a miscarriage at about the sixth week of pregnancy—that being the first. The physician who attended her was under the impression that the entire ovum had been expelled at the time. She also informed me that the miscarriage was accompanied with a considerable degree of hæmorrhage. In a few days subseqnent to the accident, under the physician's

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advice, she left her bed and came to this city on a visit to friends, taking exercise about the town as usual. But soon after her arrival here, she observed a fullness in the hypogastric region which did not exist previously. This was accompanied with a constantly increasing pain and uneasiness in that region, with much tenderness on pressure.

On examination, I found, in the lower portion of the abdomen, a large globular body—hard, firm on pressure, very sensitive and perfectly dull on percussion. It presented, to all appearance, a striking similarity to a uterus in the fifth month of pregnancy. It was with difficulty that her present state could be reconciled with the previous history as represented by herself and husband. I prescribed anodynes and left my patient completely non-plussed.

On my visit the next day, I found the patient not only no better, but much worse. The pulse was now 140 and very feeble; the temperature 103° F. The uterine globe was still further increased in size, and exquisitely tender to the touch. The patient presented a most ghastly appearance, indicating the near approach of death. The skin was bathed in perspiration, and the patient occupied the position on the back, with the lower extremities retracted, without the ability to move because of excessive pain. Here was a state of affairs truly inexplicable.

A vaginal examination disclosed the fact that the os uteri was firmly closed and very small—not larger than at the second month of pregnancy. The cervix was considerably elongated—at least 1½ inch—firm and unyielding. The globe of the uterus could be felt through the roof of the vagina, large and very tender.

I continued to visit the patient at brief intervals during the day, but only to find the symptoms becoming more aggravated at each visit. The uterus appeared to be constantly increasing in dimensions and in tenderness on pressure. Indeed, the entire peritoneal surface seemed to be involved in excessive tendernass, while the general prostration was growing more alarming every hour. During the whole of this time there was no discharge whatever from the uterus.

After viewing the case in all its varied aspects, I reached the conclusion that I not only had a case of peritonitis, but one complicated with a dangerous concealed hæmorrhage. The globe of the uterus now had become so hard, and tense to the touch, through the vagina and abdominal walls, it impressed me with the apprehension that rupture of the uterine walls might occur at any moment.

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Puerperal peritonitis and concealed hæmorrhage at this stage of pregnancy was a complication so rare, that no instance of the kind ever came under my own observation. The combination of circumstances in the previous history of this case convinced me that gradual accumulation of blood had been going on in the cavity of the uterus from the date of the supposed miscarriage, forcing and distending the reluctant walls apart until it amounted to the present dangerous state of affairs, caused either in the first instance by the presence of a dead fœtus, or adherent placenta.

This view of the case at once explained the presence of the septic cause, the development of peritonitis, and at the same time the exciting cause of the internal hæmorrhage. Doubtless spasmodic contraction of the os uteri and cervical canal had produced absolute closure of these outlets, so that all blood escaping from the vessels of the uterus had been retained, and the probability was there was a continuation of hæmorrhage.

Treatment.—Acting on these suppositions, I arrived at the conclusion that the first object to be accomplished was the speedy evacuation of the uterus of its contents; secondly, to induce firm contraction of the organ as after regular labor; and finally to trust to restoratives for the establishment of reaction and sustaining the exhausted powers, with antiseptics to meet the peritoneal fever. Enemata containing fluid extract of ergot, ℥ij; carbolic acid, gtt. vj, and morphia one-fourth of a grain in solution, were ordered to be thrown into the rectum every two hours until uterine contractions were produced. At the same time, for the purpose of inducing easy and rapid relaxation of the os uteri and obliteration of the elongated cervix, the hot water douche in large quantities was practised for two minutes every half hour, with infinite comfort to the patient.

In the space of six hours, under this vigorous treatment, the os became rapidly relaxed and widely opened, while the uterine contractions were so frequent and vigorous as to resemble active labor pains. A large clot of blood could now be detected projecting from the dilated os. This was gently removed, and very soon a most violent uterine contraction occurring, caused the expulsion of the entire contents of the cavity, amounting to nearly a gallon in quantity. The larger proportion of this consisted of firmly coagulated blood, so tough as to resemble the tissue of liver, but in a perfect state of preservation. This was doubtless due to the rigid contraction of the os uteri and perfect exclusion of atmospheric air. The remaining portion of the mass, probably

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one-fourth, consisted of fibrinous concretions in a state of preservation in various forms and dimensions. Some were round and almost globular in form, and perfectly solid; others were elongated, either round or in flattened strips; while others still presented the form and appearance of broad, thick membranes—some being two inches square.

All of these concretions were yellowish-white in color, and resembled these formations generally. There were no indications whatever of hydatid formation.

After the expulsion of this large mass, the uterus contracted thoroughly, and sank to a level with the pubis. But a fearful degree of exhaustion ensued. I did not think it possible for the patient to survive through the night. The complexion was completely blanched; the skin moist and clammy; the extremities cold. The pulse was so frequent and feeble as to be scarcely perceptible.

I omitted to mention that a softened placenta was discovered in the mass of coagula and concretions, apparently of a fœtus not more than two months old. That had been manifestly the prime cause of all the difficulties. After the uterus became free and well contracted, the condition of the stomach improved so that the patient took incredible quantities of stimulants and nourishment in connection with the following prescription:

℞. Codeia.....gr. j.
Tinct. belladonna.....ʒss.
Cerum oxalate.....ʒss.
Mucilag. acac.....ʒiiss.
Spts. ammon. arom. .....ʒiij.
Tinct. digitalis..... .....ʒj.
M. S. A dessertspoonful every two hours.

Sinapisms were applied extensively to the extremities, and sulphate of quinia was given in small doses at brief intervals.

I left my patient at 11 P. M., supposing that she would not survive until morning, but on my return visit the next day I found her not only alive, but in an improved condition. The uterine globe had entirely disappeared within the pelvis, and not a tablespoonful of blood had been lost after contraction. Subsequently, with the addition of tincture of aconite, liquor ammoniæ acetatis and antiseptic douches, the fever gradually subsided, the patient gained strength rapidly, and was soon in a state of convalescence.

In the history of this case there are several features rela-

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tive to its pathology and treatment worthy of consideration and notice. First, the cessation of all discharge from the uterus soon after miscarriage, followed by a gradual enlargement of that organ during the two weeks succeeding; then a much more rapid enlargement, until it reached the dimensions of the fifth or sixth month of gestation, accompanied with exquisite pain and tenderness, peritonitic symptoms, high febrile reaction, complicated with all the indications of the extreme anæmia and exhaustion of dangerous hæmorrhage. Finally, the excessive contraction of the os uteri, ultimately ending in dilatation and the expulsion of an enormous mass of tough, well preserved coagula, associated with a large amount of fibrinous concretions and a small, softened placenta.

The most notable points in the history of treatment were the prompt and remarkable action of the hot water douche in producing speedy and complete relaxation of the os, and finally the potent influence of the ergot enemata in inducing energetic uterine contractions and the expulsion of the contents. Finally, the favorable influence of the belladonna, digitalis and restoratives in sustaining the flagging powers of life and bringing about a reaction, and the rapid subsidence of the septicæmic fever after a complete removal of the septic cause.

Proceedings of Societies.

College of Physicians of Philadelphia.

[*Dr. J. Ewing Mears, Secretary.*]

April 4th, 1883. **Tubercular Cerebro-Spinal Meningitis.** Dr. J. T. Eskridge, Physician to St. Mary's and Jefferson Medical College Hospitals, read a paper on this subject. In 1768, Dr. Robert Whyt, of Edinburgh, described the common form of acute hydrocephalus, directing attention to the connection between acute inflammation of the meninges of the brain and dropsy of the ventricles. Half a century later, French anatomists showed that in the majority of Whyt's cases, the membranes of the brain were the seat of tubercular deposit. In 1825, Marshall Hall described hydrocephaloid disease; soon were added the observations of Gooch

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and Abercombrie. In this disease, called by Watson, *spurious hydrocephalus*, no inflammation is supposed to exist although effusion is found in the ventricles. Fine granulations on the cerebral meninges, often unattended by appreciable inflammation had been observed, but their exact nature was unknown until 1830, when Papavoine showed them to be tubercles. Dr. Samuel Jones Gee, several times examined the cebro-spinal opening *in situ*, and always found the membranes about it healthy. The spinal internal arachnoid was distended with fluid, especially around the cauda equina. He never observed any other morbid condition within the spinal canal in tubercular meningitis. He examined the cord in a *minority* of cases.

About 1869, MM. Magnan, Hayem, and Lionville published cases of tubercular cerebro-spinal meningitis, giving as their opinion, that tubercles occurred at the same time in the membranes of the brain and cord. The special signs attributed to this disease were, tremblings, contractures, tossing, restlessness, tetanic seizures radiating to the neck and trunk, and temporary paralysis. Autopsies revealed lesions of cerebral membranes, and granulations on the surface of the spinal pia-mater and arachnoid. Once the dura-mater was most affected and fibrinous exudation was present. Flint says: "Tuberculosis of the pia-mater of the spinal cord has been found in many instances, and, probably, is the rule." He, however, does not appear to have met with a case in connection with tubercular meningitis. Huguenin (Ziemssen's *Cyclopædia*) ssmply says: "Tubercles are found in the spinal cord in many cases of tuberculosis of the pia, and their behavior is the same as in that of the brain. The inflammatory affection of the pia seems to pass down a varying distance within the canal. There are no trustworthy statements as to the changes of tissue in the spinal cord.

Mr. Shaw reports a case (*Trans. Path. Soc.. Lond.*, Vol. II.) of tubercles of the brain, spinal marrow and its membranes who was paraplegic, but conscious to the last. In Vol. XXI, same Transactions, Dr. Walter Moxon reports miliary tubercle of the spinal dura-mater in a case of tubercular meningitis. The patient was a girl, æt. 17 years; duration of disease seventeen days.

In *St. George's Hospital Reports*, 1879, fifty cases of general tuberculosis are analyzed. In a large number, brain lesions were found, but only in one instance was the spinal cord or its membranes diseased. That spinal lesions were unsuccessfully sought for in cases of tubercular meningitis appears

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from the report. The case in which the spinal meninges were involved, occurred in a 7½ months' child, male, æt. 4 years, of strumous diathesis and consumptive family. The mind was precocious and skin dry. The disease began with cough; headache after about two weeks, when the cough almost ceased. The duration of the lung trouble was 61 days; of the head about 47. Tubercles were found in lungs, pleura, and spleen (?); on the meninges of the brain and arachnoid of cord, and a nodule was on the under surface of the cerebellum.

H. Rendu, Landouzy and Chateaufort, in 1873, 1876 and 1878 respectively, added to the literature of tubercular cerebro-spinal meningitis. Debove (*Le Progrès Médical*, 1879) reported a case, in a man, æt. 29, suffering from pulmonary phthisis. He suffered from severe lumbar pains and unsteadiness of gait for about 2½ months; paralysis of left leg and inability to void urine three days; paralysis of both legs, insensibility of the left and partial insensibility of the right two days. Delirium for the first time about twelve hours before death. At the autopsy, tubercular granulations were on all the membranes of the cord, most abundant on the pia mater near the anterior and posterior fissures of the cord; congestion intense in the lumbar region, and suppurative meningitis most marked posteriorly in the dorsal; tubercles sparse and congestion slight in the cervical region. A few tubercular granulations were seen along the fissures of Sylvius, with little congestion of the brain meninges, without suppuration or fibrinous exudation. Cerebral substance normal and ventricles did not contain an abnormal quantity of fluid.

Dr. Debove calls attention to the following facts in his case: First, the primary lesion was in the spine, the brain becoming secondarily affected, the reverse of what usually takes place. Second, the principal phenomena during life were due to spinal rather than cerebral lesion. In the first report of this case, he called it tubercular cerebro-spinal meningitis; in his second, a few months later, tubercular spinal meningitis.

Galliaux, in 1881, reported a case of tubercular cerebro-spinal meningitis. The man, 29 years old, was brought to the hospital in a semi-conscious condition two days before death. His wife said he had suffered cough six weeks, but a few days before, it ceased, and he began to suffer from fever, diarrhœa, and epistaxis—symptoms which his doctor attributed to typhoid fever. The autopsy revealed tubercu-

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lar infiltration of the lungs with small cavities at the apices, pleuritic adhesions, extensive ulcerations in the intestines; in the brain, normal dura mater, pia mater adherred to the brain substance, most marked around the tuber cinerium, and on the internal surface fine tubercular granulations, most abundant in the fissures of Sylvius: no pus nor free fibrinous exudation. Meninges not thickened nor much congested, nearly normally transparent. Some serous fluid was around the tuber, and similar fluid filled the lateral ventricles. The cerebral substance was soft, but presented no appreciable lesions. In the spinal canal, the dura mater adherred to the visceral layer of the arachnoid, its blood vessels were injected, evidences of slight inflammation were present, and fine tubercular granulations were on its internal surface.

The following case presents many features in striking contrast to the phenomena exhibited by those already reported:

H. J., æt. sixteen months, moderately well nourished but excitable. A superficial supperating gland was on the anterior portion of the neck for many months. The father is strong and sturdy with an exceptionally good family history. The mother is thin, anæmic, and painfully nervous. Her ancestors were free from phthisis and scrofula; her father and mother, aged 70 each, are living and well. Some brothers died from consumption, apparently induced by exposure and dissipation. When about ten months old, the child had irritative fever, apparently from teething, lasting four or five days. During the morning of April 15, 1882, about six months after the fever, it was apparently well, and spent a time in play about the yard; but in the afternoon, it became feverish, fretful and refused to eat. At noon the next day, I found evidences of alarming illness attended by great prostration. Ten or fifteen dark blotches of extravasated blood were on various portions of the body; the head was somewhat retracted, and the eyes were turning from side to side; temp. 103°; pulse 150; resp. 84. The central incisor teeth only were erupted, but the gums covering the lateral incisors were swollen and painful. These were freely lanced, and the child placed in a hot bath and given potassium bromide. At 4 P. M., pulse 180; resp. 96. A violent tetanic convulsion with occasional clonic movements took place during the examination. The face was extremely pale and the child thought to be dying. The seizure lasted in its worst form about one hour, during which time the patient lay immersed

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in hot water. After the fit passed off, the left arm and leg remained rigid, the hand shut and the foot extended until 4 A. M. the next day. The first evening of my attendance, temperature fell to 102.6°; pulse varied from 160 to 180, and respiration from 90 to 96. The hemorrhagic extravasations disappeared when the body was in warm water. Beginning on the morning of 17th with temperature of 101.5°, pulse 160, and respiration 84 per minute, the symptoms gradually ameliorated during most of the two succeeding days.

April 19. Morning, temp. 100°; pulse 118; resp. 50. Restless, refused to eat, cried and moaned most of the time, and slept in short naps only. 8 P. M., temp. 103.8°; pulse 135; resp. 84. Child apparently was much worse. A cough beginning about that time was the only evidence of chest trouble. Twenty-four hours later, the resonance of the apex of the left lung was much impaired, but no rales could be detected. On the 20th, child slept a good portion of the time. From the 20th to 24th, it took little nourishment, vomited large quantities of phlegm, and incessant cough attended by large mucous bronchial rales, all over the chest, kept the patient fretting. Temperature ranged from 101.8° to 103.5°; pulse from 112 to 140; respiration from 40 to 60.

24th. 11 A. M., temp. 98°; pulse 120; resp. 48. 6 P. M., temp. 105°; pulse 130; resp. 60. From 24th to 29th, temperature ranged from 98° to 100°–103°, the rise being as often during the morning as afternoon. Pulse varied from 130 to 140, and respiration from 68 to 70. On 29th, Cheyne-Stokes respiration was present; temperature did not descend below 101°, and reached 102° at 6 P. M. In the evening, Dr. Charles K. Mills saw the case with me; we agreed that it was probably tubercular meningitis of an irregular type, although the peculiarity of some symptoms made us doubtful as to the diagnosis.

On 30th, morning temperature 98°; pulse 116; resp. 50; evening, temp. 104°; pulse 170; resp. 70. Pupils small, head again retracted, and the child kept up a pitiful moan. During afternoon, Dr. T. G. Morton met me in consultation. He thought it a case of tubercular meningitis. Every effort was made to keep the child nourished. It was given potassium iodide and bromide, and small doses of calomel, or corrosive sublimate. When bromide failed to relieve, twenty drops of paregoric were administered every hour until quiet was produced. Cold occasionally applied to the head, and mustard to the nape of the neck.

May. The highest axillary temperature was on 11th, in

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the morning, (105,5°); the lowest was on the 1st, in the morning, (95.6°). Exacerbations of fever were very irregular. On a few occasions the temperature rose to 103° to 105°, and descended to normal or below the same day; but febrile paroxysms extended over a period of twenty-four to thirty six hours, and the lull, during which the temperature was normal or subnormal, lasted from twelve to twenty-four hours. Twice the period of heightened temperature with remission lasted six days. Only once, a period of three days, the temperature remained normal or below. Throughout the month, the fever had marked remissions, always attended by free perspiration, simulating malarial remittent fever. Pulse and respiration were most rapid, as a rule, when the temperature was highest. The pulse ranged from 116 to 180 per minute, being 170 on one occasion (when the temperature was only 96.5°), and frequently had a rate of 150 to 160 with a normal or subnormal temperature. The frequency of respiration varied from 36 to 86 per minute, the average being about 60.

The posterior muscles of the neck were firmly contracted on the 5th, and remained so nearly two days. From the 1st to 8th, the child was restless and required repeated doses of paregoric. On the 9th, it became more quiet, but semi-choreic movements of the muscles of the neck, face, and upper extremities, when it was awake, were noticed. Those movements lasted parts of two days only. During the 11th, child was drowsy, and could scarcely be awakened, although it had taken nothing to induce sleep the previous two days. It would drink, however, when milk was poured into its mouth. From April 16 to May 12, the pupils had been rather small, and often much contracted; but subsequently to the latter date they dilated, sometimes to their full extent, just before and during a paroxysm of head pain. On the 14th, cough returned and was more annoying than during the first attack. Subcrepitant rales, most abundant in the upper portion, were heard in the left lung. Seven and a half grains of quinia were given in divided doses. This daily quantity was continued two months, with the exception of two or three days. From 18th to 31st, the child kept up an almost constant cry, and apparently suffered great pain. Opium gave relief. On 18th, the choreic movements returned and continued a day or two. On the 19th, about the time that the lateral incisor teeth were erupted, the left ear discharged considerable non-offensive pus. The next day, eight twenty-drop doses of paregoric were given at hour in-

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tervals before rest was obtained. On 22d, when the muscles of the back and right side of the neck were contracted, ten thirty-drop doses of the same were given at equally short intervals; and on 23d, fourteen and a half drachms were administered without entirely quieting the child. The discharge from the left ear, still yellow, was thinner and more offensive. It soon became exceedingly unpleasant; by the last of the month the ear ceased to discharge. Instead of paregoric, morphia was subsequently employed, and gradually increased, the quantity within two weeks during some of the nights, being two and a half grains. During the afternoon 31st, he was bright, free from pain, and quite playful.

June and July. Temperature ran a less variable course, reaching 104.1° only once (June 9), and never descending more than a degree and a half below the normal. The average temperature for the two months was about 99°. The pulse range was greater, the frequency being 180 on a few occasions, and once (July 8) as low as 86 per minute. When the pulse was slow it became intermittent.

June 5. Head again retracted, large doses of morphia being necessary to afford relief. About that time the child became very passionate, screaming, and striking at every one (except its mother) who came near it. It was conscious and rational, and would promptly answer in the affirmative when asked if it wished to be taken out in its coach.

8th. Left ear again discharging non-offensive, thick, yellow pus. Diffuse bronchitis with numerous mucous rales, causing great oppression in breathing, set in about that time and lasted three or four days.

On evening June 11, with widely dilated pupils, child began to scream, and continued to cry vigorously, manifesting pain four or five hours, notwithstanding four doses of one-third grain of morphia each at short intervals. Next morning it seemed to be free from pain, but was not sleeping continuously.

14th. Both ears discharging quantites of yellow non-offensive pus. No teeth erupted, the gums not being swollen. From June 1st to 14th, when not under the influence of morphia, he was almost constantly screaming. About middle of June, it became quiet except when disturbed. During latter half of June, and all of July, no anodyne was required. When large quantities of morphia were necessary, the axillary temperature was only exceptionally above 99°.

19th. Diarrhœa began and lasted a few days, the food passing through the bowels undigested.

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July 1. I began to register the surface temperature of the head, two thermometers always being used at the same time.

8*th*. Pulse was slow and intermittent, stomach irritable, and bowels loose. The child was decidedly worse every second day, being feverish on alternate days; the fever passed off by free perspiration. During the month, patient improved, and was taken into the open air every clear day, and sometimes during the early morning hours.

August. From 1st to 15th, child was quiet, and did not fret when left undisturbed, the temperature ranging from 97.5° to 99.5°. On afternoon of 16th, it suddenly became convulsed, rigid, and so remained about ten minutes.

18*th*. Some twitching of the muscles of extremities, especially of hands and feet. Breathing was of Cheyne-Stokes variety. One forty-eighth grain of morphia relieved pain, it being the first day that an anodyne had been necessary since June 1st. Increasing quantities of morphia were required almost daily the remainder of the month, the child being feverish and restless every afternoon, and frequently screaming violently from head pain. Range of temperature for the last eight or ten days of the month was from 100° to 102.5°. On the 25th, 26th, and 27th, Cheyne-Stokes respiration, minus the intermission, was present; and on the 28th, typical Cheyne-Stokes breathing lasted one day only.

September. On the 1st, 2d, and as late as 4 P. M. of 3d, normal axillary temperature, and fairly good pulse and respiration, but the surface temperatures of the head at 4 P. M., of 3d were 1° higher than the axillary. It began again to cry with apparent head-pain. The pupils were widely dilated. While the thermometers were still on the head, it became convulsed. At first every muscle was rigid, the posterior muscles of the neck and those of the back being most contracted, producing opisthotonus. The eyes rolled from side to side, and a few spasmodic movements of the muscles of the body took place. The spasm lasted about half an hour, but the leg muscles remained rigid much longer. Respirations were 68, pulse 130. At 9 A. M. next day it had another convulsion, which soon passed off, leaving a number of muscles contracted. At 10 A. M., the muscles of the back of the neck, the flexors of the legs and arms, and the extensors of the feet were firmly contracted. Twitching of the facial muscles took place occasionally, each spasmodic contraction of these muscles being attended by a scream, indicative of great suffering. Temp. 103.5°; pulse 148; resp. 16. Head temperatures were half degree below the axillary.

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The axillary and head temperatures continued to rise until the former reached 104° and the latter 103.5°. The condition of the muscles remained nearly the same during the day, except those of the eyeballs. which became more affected, and kept up a continuous nystagmus. Respirations became very slow and irregular, the pause often being from ten to fifteen seconds in length. 10 P. M., temp. 103.5°; pulse 140; resp. 8. Numerous bronchial rales throughout chest. During the next two days, temperature varied from 102.5° to 103; pulse from 140 to 150, and respiration from 28 to 34. Spasmodic movements of the facial muscles ceased, the back muscles of the neck and flexors of the arms relaxed, but the adductors of the legs and the extensors of the feet remained contracted, and so continued gradually increasing until death, nearly three months later. The following week, temperature ranged from 97 to 100.5°, average being about 99°. The axillary temperature was frequently lower than the temperatures of the head. Breathing was of Cheyne-Stokes variety once or twice, and on a few occasions it was slow and irregular. The head was retracted about one-half the time, and always associated with pain, irritability, and heightened general and surface temperatures. Small doses of morphia (one-fourth to one-eighth of a grain) were sufficient to quiet the child.

13*th*. 10 A. M., temp. 93.8°; pulse 96; resp. 14. Head temperatures were about 5° degrees higher than the axillary. After that date, to maintain the body heat, bottles filled with hot water were kept constantly applied to the extremities. The remainder of the month the temperature did not descend below 95°. Deformity of the legs and feet became more marked. The legs were forcibly crossed near the body, and the feet were extremely inverted and extended. A straight line drawn from the anterior surface of the knee to the upper surface of the tarso-phalangeal joint of the great toe passed through the instep, and one drawn from the popliteal space to the under surface of the same joint of the toe just touched the under surface of the heel. The child was peevish and fretful most of the time. An afternoon rise in the temperature was the rule.

On the 28th, the biceps muscle of right arm was contracted. Next day it was more flexed, and the pulse was more intermittent. The head became so much retracted about the latter part of the month that deglutition was difficult. After an issue by Vienna paste over the upper portion of the cervical spine, the head rarely retracted, and only to a slight degree.

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October. General condition continued about the same, the right arm still being flexed. On 6th, left arm was affected, the flexor muscles of the forearm being contractad, and the hand deflected to the ulnar side. From that date the arm, like the leg muscles, became more firmly contracted. The right arm was drawn in front of the chest and firmly held against it, the forcarm being flexed so that the closed fist was under the chin, making it necessary to cover the hand with cotton to prevent its interfering with respiration and deglutition. The biceps muscle of the left arm was never firmly contracted, the flexors of the left forearm being mainly affected. The left hand was forcibly flexed upon the forearm, and turned to the ulnar side, the finger-nails striking the first phalanx of the thumb. The palm of each hand was padded with cotton to prevent injury by the nails. During the month, axillary temperature varied from 98° to 101.2°, the average being nearly 100°. Head temperatures were a little lower than the axillary. On 10th, both eyes turned to the left, and occasionally moved spasmodically downward and far over toward the left side. The eyes remained deflected toward this side, but at times were nearly straight. Spasmodic movements of the eyes in various directions were noticed when the child suffered much pain; sometimes a grain of morphia in twenty-four hours was required. From the 18th to 29th, respiration was of Cheyne-Stokes variety; child being restless and suffering pain most of the time. Occasional spasmodic twitchings of various muscles of the body were noticed, especially those of the face and arms. Clonic movements seemed due to increased cerebral irritation, and were almost invariably followed by screams; at those times the permanent contractures were worse. On 24th, two grains of morphia were given before the pain was relieved. The child stared meaninglessly for several days, but it was not found to be blind until the 29th. An ophthalmoscopic examination of the fundus of each eye showed both optic disks to be very white, and slightly swollen.

November. The first twenty days of the month the child was comparatively quiet, ate well, gained some flesh. It was most irritable the 3d and 11th, but did not have much rise of temperature on those days. The child was worse every second day.

21*st* and 22*nd*. Numerous bronchial rales, but no fever; breathing little more labored than usual.

23*d*. Temp. 98°; pulse 108; resp. 28. Large bronchial and subcrepitant rales abundant.

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24th. 10 A. M., temp. 96.7°; pulse 130; resp. 40. 6 P. M., temp. 99.6°; pulse 140; resp. 52. Impaired resonance posteriorly; crepitant and subcrepitant rales were observed.

25th. 10 A. M., temp. 101°; pulse 160; resp. 80. Marked dulness over the lower portion of both lungs posteriorly. The child noticed nothing, but swallowed when liquid was placed in the mouth. 6 P. M., temp. 101.5°; pulse 165; resp. 92. Respiration was ascending and descending, but no intermissions occurred.

26th. It died at 2 A. M., being able to swallow five minutes before death; no convulsions occurred. Breathing became very slow a short time before life was extinct.

Sectio cadaveris was made twelve hours after death by Drs. C. K. Mills, I. E. Roberts, and myself.

Rigor mortis beginning; skin rough, wrinkled, and very thin. Great emaciation; subcutaneous fat entirely absorbed. When one year old it weighed twenty-five pounds, but after death (age about two years), only eleven pounds, although its height was greater than that of most children of same age.

Head.—Circumference 20 inches; transverse arch (from mastoid to mastoid) 14 inches; right half of arch to sagittal suture $6\frac{7}{8}$ inches; left half $7\frac{1}{8}$ inches. Head not greatly enlarged. Sutures closed externally, except junction of the coronal and sagittal. Skullcap so thin and yielding, bending like bonnet-board before the saw, that much care had to be exercised in its removal to prevent injuring the brain or its coverings. Dura mater not more adherent to the bone than usual in children, except along the sagittal suture, where it became necessary to use considerable force, aided by the knife. All sutures were close internally. Internal surface of the bony cap was smooth, the bones being very transparent, and measuring in the temporal regions from $\frac{1}{40}$ to $\frac{1}{32}$ inch thick, and in other situations from $\frac{1}{12}$ to $\frac{1}{8}$ inch. Dura mater was thin and pale, and its sinuses nearly empty, containing no clots and but little blood. The pia mater on the convexity of the brain was so attenuated and transparent that it was difficult to distinguish it. The various fissures could be traced without removing this membrane. The pia mater over the orbital surfaces of the frontal, the basal surfaces of the temporal and occipital lobes presented the same attenuated, transparent appearance seen on the convexity. Membrane covering the anterior and posterior subarachnoidian spaces on first exposure seemed to be opaque, but on cutting it, a serous fluid escaped, leaving it of the usual appearance. A few millimetres to the left of the optic

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chiasm, two yellowish-white spots about one-eighth of an inch in greatest dimensions, were seen in the pia mater. The convex surfaces of both hemispheres on palpation gave decided fluctuation. The lateral ventricles were filled with a colorless watery fluid, and their bodies and horns were enormously dilated. The foramen of Monro, third and fourth ventricles, and Sylvian aqueduct were enlarged about two or three times their normal. On the walls of the lateral ventricles and their dilated horns, prominent veins were seen everywhere, forming beautiful arborescent appearances. The veins of the intra-ventricular striate bodies, of the choroid plexuses, and the veins of Galen themselves, were enlarged and prominent. The ventricular fluid measured fifteen ounces. From the anterior extremity of the anterior horn to the posterior extremity of the posterior horn, the greatest length of each lateral ventricle was 6¼ inches. Both ventricles appeared equally dilated. The brain substance constituting the walls of the lateral ventricles was thinnest in the region bounding the dilated posterior horn, within and below, where it measured about one-sixth of an inch. Sections through the grey and white matters showed no punctæ vasculosæ, the brain-substance throughout being markedly bloodless. It was firm and cut cleanly, not adhering to the knife.

The cervical and upper dorsal portions of the spinal cord and its membranes presented nothing abnormal on microscopic examination.

Thorax.—No pleuritic adhesions or effusion. Smaller bronchial tubes nearly filled with muco-pus. Lower and posterior portions of lungs œdematous and congested. Apices of lungs firmer than normal; in right apex a small cicatrix and several little nodules. Heart very small, but apparently normal. Abdomen not examined.

Parts of the brain and cervical portion of the spinal cord and their membranes, and a small piece of the apex of right lung, properly hardened, were sent to Dr. L. Brewer Hall for microscopical examination. The results he gives as follows:

"Sections of the spinal cord and membranes show oval masses of rounded cells along the vessels of the dura mater, lying chiefly outside their walls. In some places the coats of the vessels are thickened; the nervous tissue appears normal. Similar appearances are occasionally seen in the membranes of the brain; many sections, however, show nothing abnormal. In the apex of the lung there are minute

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inflammatory spots, visible in some of the sections only. Part of these consist of rounded cells about and within a bronchus, but others are surrounding bloodvessels and not encroaching upon their calibres. The pathological condition is tubercle, chiefly of the membranes of the spinal cord, less abundant in the meninges of the brain, and rare and small, though present, in the lung."

Remarks.—In this case periodicity of temperature, with numerous exaggerated symptoms of brain disturbance, were marked. During these periods, in which the case ran a less acute course, slight exacerbation of fever was noticed nearly every alternate day. After the first few weeks, when fever began to reach its highest points, paroxysms of fever, headache, and restlessness varied from a few hours to one or two days. The fever invariably passed off by free perspiration. Some days the fever was remittent, and on others intermittent. I have frequently observed a striking similarity between the temperature variations of malarial fevers and those due to brain diseases; but never have I seen the temperature of the latter diseases resemble that of the former when the membranes or cortical substance of the brain was uninvolved. Fevers of cerebral origin differ from those of malarial poisoning, in that the paroxysms of the former are less regular in occurrence and duration, and are not so easily prevented by large doses of quinine, although in the case reported, large daily quantities of quinine prevented excessive rise of temperature, and lessened the frequency of paroxysms.

The clinical history, when taken in connection with the varying body and head temperatures, shows this case to be possessed of a certain individuality. The quantities of morphia, two to three grains in twenty-four hours, given to a child less than two years old without prodvcing death, seem almost incredible. At first, twenty drops of paregoric were sufficient, but this preparation was gradually increased until about two ounces were necessary for twenty-four hours; in the same way morphia was increased. After having discontinued the use of morphia two months, the return of headpain compelled resort to it again. This time small doses were at first sufficient to quiet, but in a few weeks one-third to one-half grain doses were required. While large doses of opium were being administered, neither diarrhœa nor vomiting was present.

The extraordinary duration of tubercular disease of cerebro-spinal membranes—nearly eight months—simulated rare cases of sporadic cerebro-spinal meningitis. Ordinary cases

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of tubercular meningitis run their course in from two to four weeks; a few have lasted about ten weeks. There is, however, a rare case of tuberculosis of the cerebral membranes (*St. George's Hospital Reports*, 1879), in which the head symptoms were of twelve months' duration. The patient, age 35, was admitted into the hospital a few hours before his death. The affection began suddenly a year before, with embarrassment of speech and deglutition. Failure of sight, with severe cough and wasting were of six months' date. On admission, the symptoms were general weakness, the arms in particular moving with jerking action, and requiring concentration of thought to influence them at all; loss of power of deglutition, during attempts at which the head was turned to the right; inability to protrude the tongue; complete anæsthesia of the soft palate, indistinctness of speech, the vocal cords seeming partially paralyzed; dulness of vision, ptosis, frowning of the forehead, sluggishness of the pupils and drowsiness; but no derangement of mind. Post-mortem revealed a few tubercles in the arachnoid on the convexity of the brain; a little lymph in the inter-peduncular space, without tubercle; the medulla and its nerves normal; left kidney small. This case, taken in connection with the one I reported, is interesting on account of its long duration, decided motor disturbance of cerebral origin, and the slight lesion found in the arachnoid of the brain, the spinal cord apparently being uninvolved. The long duration of my case may have been due to tubercles being sparsely scattered on the membranes of the brain and cord, without any other organ becoming sufficiently affected to endanger life.

In tubercular cerebro-spinal meningitis, are the paralysis and rigidity of spinal or cerebral origin? H. Rendu concludes that tubercular granulations on the spinal meninges have only a purely anatomical interest, and their clinical value has been exaggerated. In Debove's case the chief symytoms were due to the spinal lesions, most marked in the dorsal and lumbar regions. In Chateaufort's case, the spinal symptoms were first. The patient had advanced pulmonary tuberculosis. A few days bafore death, he felt a sharp pain in the spine radiating to the lower limbs. Marked rigidity of the trunk was present, and finally delirium and paralysis. In my case, lesions of the spinal membranes were greater than those found in the cerebral meninges.

Rendu affirms that whenever there is permanent paralysis there must be some obliteration from fibrinous exudation

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and consequent softening; he does not believe that scattered granulations or ventricular effusion are alone sufficient for its causation. Ventricular effusion, as in chronic hydrocephlus, especially, is not usually attended by rigidity of the muscles of the extremities. The pathological lesions demonstrated by different observers, abundantly prove that paralysis or contractions of a permanent character may result from lesions in the spinal cord or brain, or in both. In my case there was no paralysis, although a large quantity of fluid filled and distended the ventricles, probably because no lesion of softening existed. The rigidity in this case may be acconnted for by the comparatively sudden ventricular effusion, which apparently took place, a few months before the child's death; the brain being thus crippled, its inhibitory influence over the cord was lessened, and this nerve-centre kept up a constant muscular contraction. A more plausible explanation is found in the presence of scattered tubercle, attended by inflammation, in the membranes of the brain and cord. Tubercles were few in both situations, but most abundant in the membranes of the medulla, the centre of reflex actions.

The macroscopical appearances of the brain and cord and their membranes were those of great anæmia of the parts.

Nothing suggestive of tubercle or inflammation, save two small yellowish nodules at the left of the optic chiasm, was seen. Many microscopical sections, also, showed neither tubercular nor inflammatory lesions.

The pulse frequency of my case, like that of tubercular meningitis, divides the disease into three unequal stages. The first stage was of five months' duration, during which the pulse was rapid, being, on the average, about 130 to 135 per minute, but frequently reaching 160 to 170, and on a few occasions 180. The second stage was one month long, the pulse ranging from 76 to 120, the average being about 100. The last stage lasted about one and a-half month, the pulse being from 104 to 148, the average being about 130. During the early part of the disease respiration was most rapid when the pulse was most frequent; but later, slow respiration (8 or 10 per minute) was accompanied by rapid pulse (140 to 144).

Irregularity and sudden changes were well shown by the axillary thermometric records. On May 1, the temperature fell 8.4° in twelve hours; and three days later, 8.5° in about the same time. Diurnal variations of 4° to 6° were common. The temperatures in each axillary were compared

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sixty times; five of these the left axillary heat exceeded the right from .1° to 1.8°, the average difference being .5°; the temperatures were equal eight times, the right axilla warmer than the left forty-seven times, the difference varying from .1° to 1.8° the average being only .3°. Part of the variation may be accounted for by the difficulty of keeping children quiet while registering their temperatures.

Cerebral Thermometry.—From my paper (*Report of Three Cases of Abscess of the Brain*, May 3, 1882), I quote the following: "Dr. Gray found the average normal temperatures of the stations on the [left] side of the head to be for the frontal .65° F., for the parietal .86° F., for the occipital .72° F., higher than those of the corresponding stations on the right side. He gave as the average normal temperature of the right frontal station 93.71° F., of the left 94.36° F.; of the right parietal 93.59 F., of the left 94.44° F.; of the right occipital 91.94° F., of the left 92.66° F. Variations of more than 1.5° he considered suspicious of disease at that point, and of more than 2° strong evidence of a pathological condition."

Dr. J. S. Lombard published in 1879 upwards of 60,000 observations on the regional temperature of the head made by means of the thermo-electrie apparatus. His *averages of temperatures* of the different regions of the head are—

	Anterior region.	*Middle region.*	*Posterior region.*
Right side,	92.942° F.	92.073° F.	92.343° F.
Left side,	92.825	92.114	92.267
Both sides,	92.883	92.093	92.309

"Higher values, especially for the anterior, are more frevuently met with in ordinary examinations; but it is extremely difficult to arrive at satisfactory conclusions as to average absolute temperature from obsevations made upon individuals while engaged in the ordinary avocations of life, the results thus obtained being very variable. Under such circumstances, a temperature of 95.36° F. for the anterior region; one of 94.1° F. for the middle region, and one of 93.56° F. for the posterior region, would probably represent more correctly, in the majority of cases, the highest absolute temperatures."

By Lombard's conclusions, the temperatures of the anterior and posterior regions are higher, and that of the middle region lower on the right than on the left side of the head. In a later work by the same author, it is stated that in the experiments every one of the small divisions of the surface of

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the head might be hotter on the right side or on the left side in turn, and also many of them showed at times equality of temperature of the two sides.

In numerous observations made by myself on cerebral temperature of persons in health, and of persons suffering from general febrile conditions, the right side of the head has been found, in many instances, slightly warmer than the left. When surface thermometers are employed to register the heat of the head in disease, if we take the "highest absolute average temperatures" of Lombard for comparison, we shall be less likely to come to erroneous conclusions. If we take, then, the comparatively high temperatures, 95.36° F., 94.1° F., 93.56° F., for the normal heat of the anterior, middle, and posterior regions of the head respectively, we shall find, when we compare them with the results of the numerous temperature observations made on my patient, that much of interest, and, probably, of clinical value, may be derived by a careful study of cerebral thermometry in these cases. The results of the local thermometric records in this case may be thus summed up:—

Surface temperature of the head and upper posterior cervical region were registered on 97 occasions, during which 411 surface temperature observations were made. Cerebral temperatures exceeded the axillary 46 times; the axilla was higher than the head temperatures 47 times; and the temperatures of the head and axilla were equal four times.

Once the temperatures in the axilla and over the upper cervical region were equal; four times the temperature of the latter region fell below that of the axilla, varying from .1° to 1°; twenty-four times the heat of the upper cervical region exceeded that of the axilla, it having been on one occasion as much as 3 4° above it. The temperature in the upper cervical region was usually greater than that of the head, it having been higher 19 times out of 29.

Of the 46 times that the head temperature was greater than the axillary, the heat of the latter region was subnormal 16, normal 11, and above normal 19 times. Of the 47 times that axillary temperature exceeded that of the head, the thermometer in the axilla registered subnormal 7, normal 10, and above normal 30 times.

The lowest head temperature was 95.8°, the axillary heat being 97.8°. The highest head temperature registered was 103.5°, the axillary being 104°. The lowest axillary temperature recorded was 93.8°, the cerebral temperature standing at 98°. The highest temperature found in the axilla, at

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the time of registering the head temperatures, was 104°; the surface thermometer on the head rose to 103.5°. Once the head temperature was 4.2° greater than the axillary, but the heat of the axilla never exceeded that of the head more than 2°.

The average temperatures of the axilla, of the various regions of the head, and of the upper cervical region, are as follows:—

Parietal station.	Rolandic station.	Post. frontal station.	Sup. frontal station.	Occipital station.
Right side 99.24°	R. side 99.27°	R. side 98.95°	R. side 98.65°	R. side 98.54°
Left " 99.24	L. " 99.22	L. " 98.80	L. " 98.75	L. " 98.28

Middle frontal station 98.08°. Middle occipital 98.39°. Upper cervical region 98 41°. (The average temperature of the upper cervical region was slightly above those of the head and axilla, but the table shows a different average, the discrepancy appearing because the temperature was registered a limited number of times over the upper cervical region.) Axillary region 98.89°.

The head temperatures at no time descended to the normal, although the axillary temperature was either normal or subnormal 45 times out of 97 comparative examinations. The temperatures of each side of the head were nearly equal. Corresponding regions of the two sides rarely varied more than a fraction of a degree Fahr. The parietal stations were the warmest, the middle frontal station, only a little below the middle occipital, was the coolest.

If the observations of this case are compared with those made by Dr. Mary Putnam Jacobi on a case of suppurative tubercular meningo-cephalitis, a striking difference in the height of the temperature will be found, partially confirming the conclusions that I had almost arrived at from numerous observations on cerebral thermometry, viz., that brain lesions, accompanied by congestion or inflammation, are attended by higher head temperature before than after suppuration supervenes.

The following conclusions may be drawn from the contents of the paper:—

1. Tubercles occur in the membranes of the brain and cord, but they are more frequently found in the former than in the latter situation.

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2. Tubercular deposit may first take place in the meninges of the cord and then extend to those of brain, although the reverse is the rule.

3. Tuberculosis of the cord, contrary to the views of Rendu, has more than an anatomical interest.

4. Tubercular cerebro-spinal meningitis gives rise to special symptoms, and by a careful analysis of a number of cases, it may be recognized.

5. It is probable that many cases of so-called sporadic cerebro-spinal meningitis, that have a duration of several months and then prove fatal, are tubercular in character.

6. Paralysis or contractions may be due to brain or spinal lesions, or to both.

7. When cerebral fever simulates the periodic manifestations of malaria, the lesion is probably in the membranes or cortical substance of the brain, or in such a position as to exert pressure upon these structures.

8. Ventricular effusion probably does not give rise to paralysis or contractions; the former motor disturbance in these cases being due to softening of motor zones, and the latter to irritation of the meninges of the brain and cord.

9. Repeated microscopical sections may have to be made in certain cases of tuberculosis of the meninges before the nature of the disease is detected.

10. Right or left side of the head may, in turn, be the warmest in health.

11. When surface thermometers are used to register the cerebral temperature in disease, the normal averages should be taken to be 1° to 1.5° higher than those given by Gray and others.

12. Head temperature in disease of the brain may equal or exceed the heat of the axilla for a length of time.

13. In cerebral lesions, the temperature of the head is not marked by those sudden variations manifested by the axillary temperature in these cases.

14. Variations of head temperature in diseases of the brain take place comparatively slowly. The tendency of the heat of the head to remain permanently above the normal, while that of the axilla is normal or several degrees below, is the strongest evidence of organic disease.

15. The thermometer and the microscope in the case reported agreed in locating the greatest inflammatory trouble in the upper cervical portion of the cord.

16. Brain lesions, attended by congestion or inflammation, have a higher local temperature than suppuration going on within the cranial cavity.

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After the reading of the paper, Dr. Roberts Bartholow said the case just reported, if tubercular, is one rather of general tubeculosis than of tubercular cerebro-spinal meningitis. It may be objected that in every case of tubercular meningitis there is more or less generalized tubercular deposit. It is, however, hardly logical to place so much emphasis on the spinal affection. In most cases of tubercular meningitis, the principal seat of deposit is at the base; hence the term *basilar meningitis*, parts in immediate connection with the spinal meninges. It is more philosophical, therefore, to regard such cases as examples of general tuberculosis—now one set of organs, now another set, being selected for a special tubercular deposit. I do not, therefore, believe in the existence of cases of tubercular cerebral meningitis, or spinal meningitis, *per se*, but in a general tuberculosis, with special implication of certain organs. Under such circumstances, the symptomatology will vary with the particular functions of organs most involved.

Up to the present, cerebral temperature changes have not afforded much information. Lombard achieved but trifling results in his study of cerebral temperatures, although he employed the most elaborate instruments of precision now available for the purpose. Indeed, it is now understood that the temperature of the scalp affords no certain indication, if any indication whatever, of the cerebral temperature. A few years ago, Dr. Amidon, of New York, received a prize for an essay, in which he attempted to show that certain motor areas in the brain could be mapped out by the temperature changes in the scalp, induced by active exercise of the muscles in anatomical relation with these motor areas. But it was soon ascertained that the temperature changes were limited to the scalp, and that the "willed movements" do not, so far as at present known, so raise the temperature of the motor cortical centres as to change the temperature of the scalp. In fact, it is now known that the temperature of distant parts is influenced by slight excitation of the surface. Thus, Strumpf, of Dusseldorf, has shown that faradic stimulation of the skin of one member affects the heat of another. Thus, the influence of muscular action on the temperature of the scalp is explained. We cannot, therefore, formulate conclusions in regard to the condition of the brain from observations on the heat of the scalp. Hence, it is unsafe to draw conclusions from cerebral thermometry in the present state of our knowledge.

Dr. Da Costa had doubts with reference to the character of

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the case reported. The sudden beginning was unlike that of tubercular meningitis; it was rather that of those instances of cerebro-spinal fever which begin acutely and may become chronic. In support of this view, there was an eruption of an ecchymotic kind, in the first twenty-four hours, such as occurs in cerebro-spinal fever; there is no eruption in tubercular meningitis. Again, there was no very positive evidence of tubercle in the lung, and he thought it unlikely that a case of tubercular meningitis should have existed for months, affecting the brain and cord, and no decided tubercles in the lungs be found.

Dr. Charles K. Mills, in a number of cases of tubercular meningitis, some in children and some in adults, some general and some localized, had observed eruptions differing in character; sometimes erythematous, sometimes vesicular, sometimes ecchymotic, and probably, in the latter case, due to extreme vaso-motor paresis. Drs. Franklin and Ott, in three of four cases of tubercular meningitis, seen with these, gross appearances were present; in the fourth the appearances were similar to those exhibited by Dr. Eskridge's patient. No tubercular masses were visible anywhere, either at base or convexity, and yet the microscope revealed miliary tubercles in great abundance. These observations show the importance of not concluding that a case is non-tubercular simply from macroscopic examination.

Dr. Eskridge said it was rare to have tubercular inflammation of membranes of the brain or cord without tubercles in other portions of the body. In tuberculosis of lungs it was common for other organs to be attacked. If, in certain cases, we follow the custom of locating the disease in one or more organs, those should be selected which were most early and prominently affected. In his case the early symptoms, and, in fact, those of any prominence at all, were due to cerebro-spinal lesions. The point was well taken by the first speaker, as the microscope shows that most cases of so-called local tuberculosis are examples of general tubercular affections. He was also justified in questioning the claims that had been made by some observers for cerebral thermometry. Dr. E. was not yet satisfied that surface thermometers would enable us to locate lesions in different portions of the brain with sufficient accuracy for general diagnostic or therapeutic purposes. He called special attention to one point in his observations on the surface temperature of the head in this and other cases, viz: that a sustained high head temperature extending over a considerable period,

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while the axillary heat was normal or below, pointed to organic lesion of the brain or its membranes. Again, in brain diseases, the cephalic temperature is less variable than the axillary heat in the same cases. The sudden beginning and long duration of the case, and the presence of an early eruption, was thought by the second speaker to point to sporadic cerebro-spinal meningitis rather than to tubercular meningitis. Cases of tubercular meningitis without prodromata were the exception, but did occur. One or two of the three cases referred to by Dr. Mills, and reported in a joint paper by himself and Dr. Ott, were ushered in by convulsions, the previous health of the children having been good. Dr. Gee says "that out of twenty-six cases of primary tubercular meningitis (diagnosis confirmed by *post mortem* examinations in all), there were only two in which premonitory symptoms had not been noticed." The long duration (nearly eight months) of the present case, was not without parallel; for Dr. E. quoted a case from *St. George's Hospital Reports*, 1879, in which the meningeal symptoms extended over twelve months. Other cases of tubercular meningitis that have lasted about ten weeks have been reported. The eruption referred to in his case looked like blood extravasated under the skin, but it disappeared as soon as the child was put in a warm bath, an hour or two after he first saw it. It did not again make its appearance. The absence of microscopical appearances of inflammation militated strongly against the supposition of the disease being sporadic cerebro-spinal inflammation. So far as he knew, if the patient lived a few days after being seized with this disease, inflammatory deposits were always apparent to the unaided eye. If it be argued that the present case lasted so long that the exudate was absorbed, what was the cause of death? Irritation was increasing, as shown by muscular contractions, etc., during the last two months of illness, yet at the autopsy no visible exudation was present. In rare cases of tubercular meningitis, microscopical appearances of inflammation have not been well marked. In one case reported by Drs. Mills and Ott no tubercles were seen. In one of tubercular cerebro-spinal meningitis, reported by Galliaux, the "membranes were not thickened or much congested, presenting nearly their normal appearance." At the autopsy of Dr. Eskridge's case, the presence of tubercles was not suspected by Dr. Mills or himself, and inflammation, which, during life, was thought to exist, could not be detected by any exudate. Hardened portions of the brain and cord and their membranes, and of the lung, were given

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to an expert microscopist who knew nothing of the history of the little patient, and he was asked to decide whether inflammation had existed. He found tubercles in portions of all the organs examined. If it were not for the microscopic revelations, the case would have to be considered one of chronic cerebro-spinal meningitis minus appreciable exudation.

Book Notices, &c.

Legal Medicine. By CHARLES MEYMOTT TIDY, M. B., F. C. S., Master of Surgery. Professor of Chemistry and Forensic Medicine and Public Health at the London Hospital, etc., etc. Volume I. London: Smith, Elder & Co. Philadelphia: Henry C. Lea's Sons & Co. 1883. Pp. 636. 8vo. Cloth, $5.00.

Probably in no other department of literature is an author more often quoted in cases where reputation, life and death are involved than in Legal Medicine. Every recorded case must be carefully analyzed, and so many different factors and elements may complicate a case that it is of the utmost importance that every opinion and every word be carefully weighed. In this department ambiguous sentences cannot be tolerated, and good, sound, logical reasons must be given for every rule laid down. We may say, in fact, and without fear of contradiction, that the most difficult and responsible department of medicine is legal medicine. Seeing that this is true, it is not a little surprising that members of the medical profession, to a great extent, almost totally neglect forensic medicine, apparently forgetting that at any time their own reputation and the life of a human being may be endangered, and discredit brought on the profession, of which the first and highest duty is to preserve human life.

In the giving of evidence, preparative for the witness-box, etc., Dr. Tidy lays down valuable rules and gives much seaonable advice. As a rule, a physician, when giving evidence, does not always draw the line between facts and matters of opinion. He can be compelled to give in any facts bearing on the case, but cannot be forced to give his opinion: Again, He is very likely to wander from the subject. A medical man has to take the dying declaration of some person who has been fatally injured. Many seem to forget that this should be taken down in writing in the exact words of the dying person, and should be signed by him, if possible,

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after hearing it read; but dying declarations of a person concerning things done by himself are inadmissible. In giving opinions, the skilled witness must form his own, says Dr. Tidy, on the facts he has heard proved. This is not in accordance with our view of the subject of expert opinion in court, though the author seems to base his statement on a decision of Mr. Justice Hawkins, who refused to take the evidence of a physician, because he had not been in court during the time that the witnesses were giving in their opinion, but had based his on facts submitted to him in writing by the attorney. Very likely it was right in this case; but in many cases, even of murder, the opinion of the expert cannot possibly be influenced one way or the other by any number of witnesses.

The *value* of expert evidence has long been a vexed and vexing question. The Supreme Court of Indiana has lately decided that a physician cannot be compelled to give expert testimony without proper remuneration. That this is only just must be clear to every one.

"*A witness must not quote authorities in the witness-box.*" We accept this rule only with certain limitations. If we can never quote them, why have these authorites at all? And why recognize them as such? An intelligent jury will be more likely to give a verdict on the side of the expert who can substantiate his opinions by the best authorities. Two witnesses may express their opinions diametrically opposed; surely that one who is supported by the highest authorities should be allowed to quote them; else he may be put on an equal footing with an ignoramus.

The author very justly condemns the English law in recognizing no exemption from testifying when he may betray a professional fact. The New York laws does not recognize this and rightly, as does also the law of of Missouri. We feel bound to admit that in many cases the ends of justice may require that this privilege be given the witness; but it is a very serious thing to require evidence, which may affect the honor of a family, to be dragged into the open court; and we cannot agree with Gordon Smith in his statement that—"Society in general receives the authority in courts as paramount to all obstacles and private considerations," nor with Taylor that "the expressed opinion of the judges will be a full indemnity for the witness."

We now come to the subject proper. Chapter II concerns the Signs of Death. Some remarkable cases are noted of resuscitation after death had apparently taken place for some

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hours. One from Prof. Fort, of a child (æt. 3) resuscitated by artificial respiration continued for four hours, and not commenced till three and a half hours after its apparent death. "The absolute absence of all cardiac sounds must be determined by auscultation and palpation in a perfectly quiet room. This examination must include the chest generally, as the position and sounds of the heart may be abnormal," and it should be kept up for some hours at short intervals. Several other tests of death have been given, depending on the stoppage of circulation. In regard to the tests for the cessation of respiration, Mr. Tidy says—"The presence of moisture on a glass (held to the nose and mouth) is a far more valuable indication of life, than its absence is of death. Thus a mirror placed over the mouth of animals in a state of hybernation, is not dulled." The same is true of the feather, held near the nose. But Dr. Marshall Hall's "bat" was not disturbed by animals in a state of hybernation. We may also note that "the blood taken from a dead body, provided access of air to it is prevented, exhibits the spectrum of reduced hæmoglobin only." Most of the minor signs of death are all noticed in their usual order; but we pass on to the changes in the eye—changes in the iris, *more particularly its loss of sensibility to light.* This loss of sensibility is best determined by "oblique illuminations." Though the contractile power of the iris can be determined with great precision in this manner, the author is careful to state that complete insensibility of the pupil to light may exist, and has been recorded in many cases of disease and long-continued sleep; that in life the degree of contractility may differ in the two eyes or in different eyes, and that this contractility is also markedly affected by certain drugs and certain diseases of the eye. It has been stated that the action of mydriatics and myotics cease with life, but Mr. Tidy shows that though this may be true of bodies some time after death, it does not hold good in cases where life has only been extinct for a short time. He remarks on the cases, reported by Joseph W. Hunt, in which the iris was flaccid although the patient finally recovered, and in two others in which flaccidity was noted some hours previous to death. Believing with Küssmaul, that this flaccidity of the iris explains the dilatation of the pupils invariably occurring after death, he says that this dilatation of the pupil is of such constant occurrence that it is impossible to judge of the exact state of the pupils at death, by the condition found at a post-mortem some days afterward. As to the loss of lustre in the eye

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after death he observes "(1) The eye may lose its lustre during life, and (2) The eye may not lose its lustre for a long time after death. This has been particularly observed after death from apoplexy, and after poisoning with the oxides of carbon, and with cyanogen and its compounds, etc." Of the changes in the ophthalmoscopic appearances, the author quotes Poncet as stating that the yellowish-red of the living fundus of the eye becomes at death of a yellowish-white hue; and Bouchut as saying that on death the gasses normally imprisoned in the venous blood are disengaged, causing neumatosis of the veins; and Gayat says after death the arteries and veins of the *fundus oculi* are completely emptied, both upon the optic disc and for a limited distance around it, but that beyond this point the vessels remain filled with blood.

Post-mortem cooling is an unsettled question, because we cannot lay down any positive rules concerning it. It is a progressive change, and may thus indicate how long a body has been dead; hence the absolute temperature is not so important as the progressive and continuous cooling. Durand and Linas say 18 to 24 hours are required for a body to cool. As general facts the following are given: "1. In ordinary cases a body becomes cold in from fifteen to twenty hours after death. 2. In certain cases of disease, or where the body has been freely exposed to air, draughts, etc, the cooling process may practically be complete after four to five hours; whilst in certain other exceptional diseases, or under favorable conditions for cooling, forty-eight hours, or even three days, may elapse before the body is cold." The author thinks Caspar's limit, eight to twelve hours in ordinary cases, is too short. It is probable that in all cases of death there is, first, a slight post-mortem elevation of internal temperature, owing to the stoppage of the circulation, and to the blood being no longer cooled in its passage through the lungs. In many cases, the post-mortem elevation rises to 106 or 107° F.

As to the changes in the muscles and in the general condition of the body after death, three post-mortem stages are distinguished: (1) *The stage of muscular flaccidity and contractility:* (2) *The stage of cadaveric rigidity (rigor mortis);* (3) *The stage of putrefaction.* The first includes the interval between death and rigor mortis. In this stage there ensues complete muscular relaxation, even after severe tetanus. Sometimes, however, there is no appreciable interval between death and rigor mortis. The relaxation commonly lasts about three hours, but cases are recorded in which it

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lasted twenty-four. Rigor mortis is altogether independent of the nervous system, of the air, and of temperature, though it commonly occurs first in the muscles which retain their heat longest. Küssmaul stated that rigor mortis betokeend the actual death of the muscle, but the author quotes the experiments of Brown-Séquard in which the rigidity passed away and irritability returned when a current of defibrinated arterial, or aërated venous blood was established through the rigid muscle. Regarding the causes of rigor mortis, he agrees with Kühne, "that it is probably a chemical act and due to the coagulation of the myosin, which takes place at a temperature of 104° F., and also when acted upon by weak acids." Kühne considers that during life acid bodies are being constantly formed in and removed from the body, but that they accumulate in the muscles after death, and so coagulate the myosin; that, as putrefaction proceeds, there is a decomposition of the azotized matters with the formation of ammonia, which dissolves the myosin, and rigor mortis passes off. This view is supported by the facts—that a living muscle at rest is faintly alkaline—that immediately after contraction it is faintly acid—that during rigor mortis the muscles are markedly acid—after rigor mortis passes off, the muscles are again alkaline. Kühne also states that if a rigid muscle be subjected to 120° F., the rigidity is increased. From the experiments noted by the author, it appears that under usual circumstances rigor mortis is complete about the 5th or 6th hour after death, though various circumstances may delay it or cause it to come on almost immediately. Brown-Séquard records a case of death from typhoid fever, where rigidity commenced while the heart was actually beating and within three minutes after respiration had ceased. Mr. Tidy thinks from twenty-four to thirty-six hours in summer, and thirty six to forty-eight hours in winter is the time of the continuance of rigidity. These limits are, of course, subject to various modifications.

The author, Caspar, Briand and Kanzler agree that *the order of* parts affected by putrefaction in air is: Abdomen, genitals, breast, face, neck, superior and inferior extremities. In water: Face, neck, breast, abdomen, legs. Putrefaction *usually* commences about the third day after death by a green discoloration on the abdomen, but it is utterly beyond the power of man to give a decided, or indeed any, opinion of value as to the time of death, in the later stages after death, even with a full knowledge of the circumstances of the case.

Chapter III treats of personal identity. *Of whom is this*

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body? As to the living, it may constitute a very essential link in a criminal civil cause, or scientific evidence. The medical expert must be familiar with such questions as the permanence and appearance of cicatrices produced by various wounds, how long they will remain and their appearance after a number of years, the scientific investigations and facts regarding unnatural and natural growths, and questions relating to the effects produced by age, climate, occupation, etc. It is often extremely difficult for even the nearest relatives to recognize identity after separations. After death relaxation and rigor mortis may both produce unnatural expression in the countenance, and fourteen days after putrefaction has set in, identification is, *as a rule*, practically impossible.

Does a wound necessarily leave a cicatrix? "*A scar inevitably results from a wound involving loss of substance.*" But the clearness and distinctness with which a scar may be seen is subject to variations. It is more distinct in dark persons than in the fair, and is more narow and uniform when resulting from a clean than from a ragged cut. For bringing out an indistinct cicatrix, Foderé recommends that the skin be firmly compressed with a cold pewter plate preferably, and suddenly remove it; the blood then rushes into the sound skin leaving the scar (into which it does not enter so readily) distinctly white. The same result may be obtained by rubbing or slapping the part where a cicatrix exists. The author thinks a *white*, non-sensitive scar is not due to a wound inflicted within so short a time as three or four weeks; but we may safely say of a large scar that it did not result from a wound inflicted within two or three months. Though the medical jurist may not be able to fix the date of wound from the appearance of the scar, "he may be able to say that the appearances of the scar are, or are not, consistent with the alleged cause and date." We cannot always infer the nature of a wound from the character of the cicatrix, but we can often say whether the scar results from an accident, surgical operation or disease; and in this connection we must consider the locality of a scar and whether any enlargement of the neighboring glands exists. As to whether a cicatrix may be obliterated by time or artificial means, there is much conflicting testimony. In cases where the epidermis only is injured, or where there has been no loss of substance, the scar *may* disappear in time, says Mr. Tidy. He quotes Caspar as saying that the marks of bleeding may entirely disappear, and that he has known cases in which the marks of a scari-

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ficator have entirely disappeared after from two to three years; and Ogston, that he has known all traces of chancre to disappear in six weeks. These cases, however, are exceptional. The author says that vaccination and small-pox leave marks which are invariably permanent. He should have said "almost invariably," for the writer has seen one case in which only one very indistinct mark of small-pox (it was necessary to look at it through a magnifying glass in order to see it at all) remained; one in which every trace of a violent attack of varioloid had entirely disappeared, and several in which the scars of vaccination had disappeared, although it had taken.

Often the medical jurist has to determine whether a certain material is hair or some fibre, such as cotton, silk, linen, etc. Specimens should be examined chemically and microscopically. These substances differ widely from hair on chemical examination, but the most marked differences are seen under the microscope. To determine whether the hair is human or belongs to a brute is still more difficult. The measurements and other characteristics of hairs from various animals have been made the subjects of careful study. The author gives a very interesting table from Emil Pfaff's work, *Das Menschlicher Haar*, from which we give a few extracts: "Down (languno) from a suckling, $\frac{1}{3333}$—$\frac{1}{200}$ inch; languno from a young girl's arm, $\frac{1}{1666}$; languno from upper lip of a woman, $\frac{1}{1428}$; down of beard, $\frac{1}{166}$; hair from a woman's head, $\frac{1}{434}$; hair from female pubes, $\frac{1}{166}$; hair from a man's head, $\frac{1}{333}$; hair from axilla, $\frac{1}{166}$; hair from male pubes, $\frac{1}{233}$; hair of moustache, $\frac{1}{200}$—$\frac{1}{181}$; eyebrows, $\frac{1}{200}$; hair from man's arm, $\frac{1}{1000}$—$\frac{1}{166}$; from a man's head, $\frac{1}{370}$; hair of Spaniel dog, $\frac{1}{1100}$; of a horse, $\frac{1}{340}$, etc." Other microscopical differences also exist, as *shape, relative proportion of medulla and cortex, locality of pigment, and the arrangement of the medullary cells.* We see by the above table that although the hair on a woman's head is smaller than that on a man's head, the pudendal hairs of a woman are larger than those of a man.

The author quotes some very interesting facts from a pamphlet by Mr. Edward Saunders on "*The Teeth a test of Age.*" "At nine years of age, there will generally be twelve permanent teeth, viz., eight incisors and four molars. At thirteen, twenty teeth, viz., eight incisors, four canines, four bicuspids and four molars. In examining 1,046 children of known ages, on the principle urged by him, that *where the teeth of one side are fully developed, those of the other side*

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should also be reckoned, 530 came up to the standard. Of the remainder, none would have varied more than a year from the standard, and these always by deficiency."

Of the various stains that may be found in questions of identity, none are so important as blood stains. Their color depends on their *age*, *thickness*, the *moisture* and *temperature* to which they have been subjected, and the *kind of material* upon which they have fallen. They should be subjected to microscopic, chemical and spectroscopic tests. With regard to the microscopic manipulation, the author gives various solutions which may be used in preparations for the microscope. Water causes swelling of the corpuscles, and cannot, for this reason, be used. The following are recommended: "(1.) Glycerin, one part; water, seven parts. (The sp. gr. of this solution should be 1030.) This may be rendered faintly acid with advantage. (2.) Half per cent. solution of common salt. (3.) Sodic chloride, four parts; egg albumen, 300 parts; water, 2,700 parts. (4.) A thirty-two per cent. solution of potassic hydrate. (5.) Chloral-hydrate solution (one to ten of water) recommended by Pacini." The stain should be examined with a microscope, one-fourth inch power, and the *corpuscles measured with a micrometer*. Their diameter in man averages $\frac{1}{3200}$th inch. The following is quoted from Malinin: "If the blood corpuscles, after treatment with thirty-two per cent. solutions of potassic hydrate, have a diameter less than 0.000236 inch, the blood is probably not human. If it is above 0.000275 inch, it probably is human. If it be between 0.000196 inch and 0.000236 inch, it is not the blood of the goat, sheep or ox, but it may be of the dog, pig, or possibly of man." It should be remembered that in anæmic blood there may be both very small and very large red corpuscles. In describing the character of the corpuscles, Mr. Tidy says: "The blood corpuscles in man are circular, flattened, transparent, non enucleated cells, presenting (as generally seen) concave sides with a central bright spot." But it has been shown that in some forms of anæmia, the red corpuscles become spherical or pyriform or assume various other forms as the shape of a hammer, anvil, a biscuit, etc. Still further, the depression may be lateral instead of central.* As to their being *non-enucleated*, the reverse has frequently been observed.† The chief consideration under this head is, of course, hæmoglo-

* *N. Y. Med. Journ. & Obstet. Rev.*, Oct., 1881, p. 353.

† The results of the observations of Ehrlich on this subject are given in *Berl. Klin. Woch.*, July 12, 1880.

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bin (the oxy-hæmoglobin of Gamgee). Oxidized hæmoglobin or oxy-hæmoglobin is found in arterial blood; reduced hæmoglobin in venous blood.* In blood taken from a dead body, if access of air is prevented, we obtain the spectrum of reduced hæmoglobin. But there are exceptions to this general *post-mortem* condition of the blood-coloring matter. After poisoning by hydrocyanic acid, after death from cold and starvation, and particularly in carbonic oxide poisoning, the blood exhibits the peculiar spectrum of carbonic oxide, hæmoglobin. In cases where death has resulted from the admission of air into the veins, the spectrum of oxy-hæmoglobin will probably only be found for a short time after death. We may very properly object to the statement regarding death from air in the veins, on the ground that it is very rare that a sufficient quantity of air enters to reduce other than a very small amount of hæmoglobin, unles it could be ascertained that death was due to deficient oxygenation. This theory has not yet been propounded. Bell attributed the death in these cases to the direct result of air upon the medulla; Cormack, to distension of the right heart alone. Erichsen claims that death results from the obstruction in the pulmonary capillaries from the frothy condition of the blood, resisting the vis-a-tergo from the heart, which explanation approximates the theory of deficient oxygenation. Moore, in a paper on the subject,† gives an explanation in which the valvular element is brought out as the most important factor. Thus: 1. Air, on entering the right ventricle, fails to close the wet tricuspid valve during the ventricular systole, from its light density and compressibility. 2. During the following diastole, air enters, or rather floats, into the pulmonary artery. 3. During the second ventricular systole, the wet *pulmonary* valves also fail to close and adhere to the sides of the vessel. 4. The succeeding diastole now draws into the ventricle blood from both the auricles and the lungs. 5. The cardiac systole now returns the blood again to its original situation, as both the tricuspid and pulmonary valves are open, and thus the circulation becomes arrested. The author says that when hæmoglobin is treated with acids or alkalies, hæmatin and an albuminous principle are formed. Fownes says: Hæmoglobin is split by acids and alkalies into two proteids, viz., hæmatin and fatty acids, while Gamgee's statement is, that among the products of the

* This order is, of course, reversed in the pulmonary circulation.

† Causes of death in surgical operations. Ranney. *N. Y. Med. Record*, June 28, 1879.

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decomposition of oxy-hæmoglobin by the agency of acids and acid salts, the most interesting are hæmatin and an intermediate body—methæmoglobin.* This is the identical formula given by Gamgee for oxy-hæmoglobin, which again is wrong if that author intended it for what is called hæmoglobin, the formula for which is C_{900}, H_{960}, N_{154}, $Fe\,S_3$, O_{179}. The formula for hæmatin is C_{34}, H_{35}, N_4, $Fe\,S_5$. The following delicate test for hæmatin is given by Fownes: When blood or hæmoglobin is warmed with strong acetic acid and a solution of common salt, a substance called hæmatin separates in yellowish rhombic microscopic crystals; or we may treat blood with acetic acid, shake the mixture with ether to dissolve the coloring matter. It is an important fact that hæmoglobin is very soluble, while hæmatin is very insoluble; for if blood remains on a fabric long enough for the hæmoglobin to be converted into hæmatin, the stain will remain after washing. If the stain be perfectly fresh, it may be entirely removed by *cold water*, but on account of the action of *hot water* on the blood, it will not entirely remove a fresh stain. Hence, if it can be shown that an article has been washed in cold water, evidence to show the absence of blood-stains on the article is of little value; but if in hot water, the medical jurist will be able to prove the presence and nature of the stain.

The age of a blood-stain does not offer any impediment to the spectroscopic test.

Dr. Sorby obtained hæmatin bands after forty-four years and Mr. Tidy after more than one hundred years. For the spectroscopic examination of blood, he recommends the binocular micro-spectroscope invented by Mr. Sorby. A very clear account is given of the methods of examining for blood-stains, old and new, on white and colored fabrics, stained fabrics that have been washed, the treatment in examining the water used for washing them, stains on leather, urine containing. or supposed to contain, blood, with the general precautions to be observed in micro-spectroscopic examinations. Under chemical tests for blood-stains, he cautions us, with regard to the guaiacum test, to use the *freshly prepared* tincture of guaiacum, which should be made as follows: Wash the tears of guaiacum resin first with a little alcohol, and then dissolve the pure unoxidized resin by shaking up with a little fresh spirit. When used, we should wet the blood-stain with the *freshly prepared* tincture, and

*The formula given for hæmatin, C600, H960, N154, Fe S3, O179, is evidently a mis-print.

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then add a small quantity of an ethereal solution of hydroxyl (prepared by mixing equal parts of ether and hydroxyl.) The ether is not, however, necessary for the reaction. Although the guaiacum test is a beautiful one, it alone should never be relied on as positive proof of a blood-stain.

In examining seminal stains, we must note their general appearance, behavior when heated, chemical reactions and microscopic appearance. When heated they become of a pale yellow tint, which is very characteristic, being scarcely the case with any other discharge. They should be examined under a qtarter inch power. Longuet suggested that they be steeped for 36 to 48 hours in an ammoniacal solution of carmine. The fibres of the fabric must then be unraveled, and each examined separately in glycerin under the microscope (500 diam.) He claims that vegetable fibrillæ are not tinted by the carmine solution, whilst the heads of the spermatozoa become of a full red color.

About twenty pages are devoted to the details of post-mortem examinations, closing with a table of the average weights and measurements of different organs of the body, and one describing the appearance of the fœtus at different periods of utero-gestation.

In Chap. VI, on monstrosities and hermaphrodism, some very important points are made. The differences between the male and female pelvis are more fully given by the author than we have ever seen before, and can be commended as a proof of careful study and research. Other differences than those existing in the skeleton are also given—*e. g.;* the distance in males between the pubes and navel is shorter than between the navel and the scrobiculum cordis, the reverse being true of the female; but though mentioning that the male has more hair on the body than the female, he omits to mention the differences in the size of the hairs given in the table already referred to. He says that the blood of males is said to be richer in red corpuscles than that of females. "Exceptional cases occur where the subject of monstrosity and the determination of sex become questions of the gravest difficulty to the medical jurist, and of the most supreme importance to relatives and friends." The English, and, for ought we know to the contrary, the American, law says that if a child be born without the "shape of mankind," it cannot inherit. With the characteristic forethought and perspicacity of law-makers, this term is neither defined nor explained. The question of sex may be important in a suit for divorce, if it should be alleged by either party that the

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other is anatomically so constituted as to be unable to perform the sexual act; or it may be important with reference to the future business of the person; or in questions of legitimacy or parentage, another question would arise, Whether the person is capable of procreating its kind. In discussing "What is implied by the phrase, 'not possessing the shape of mand?'" the author says: "In such births, involving questions of law, it is better for the medical jurist to describe to the court the exact deformity, and leave the responsibility of deciding whether it be a monster in the true legal sense, to others." In the first place, if the medical jurist left subjects "involving questions of law," to the decision of others, he would never give an *opinion* in a medico-legal case; and if the law does not define or explain the phrase "shape of mankind," the medical witness is as capable of saying what it means as the most learned judge. The medical jurist should, in our opinion, state his own convictions, with the certainty that, if clearly stated, they will give more light to the jury than anything that the court may say. He doubts, in cases where the sexes are blended, whether operative interference on the part of the surgeon can be justified. "Thus, to remove two imperfectly formed testes in a girl-like boy, in order to develop more completely, as the child grew up, the girl-like character (however successful the operation), would not be easy to defend."* It would scarcely be defensible if undertaken by the surgeon on his own responsibility, even with the parents' consent or wish; but if, in consultation, it should be decided that the child would never be able to procreate its kind, it would, in our opinion, be not only a justifiable, bat a humane act.

As to what is to be regarded as *the* sexual characteristic, the author says that there can be but one answer, and that is *the genital gland.* If the genital glands be ovaries, the person must be regarded as a female; if testicles, a male; and one ovary or one testicle is sufficient to determine the sex. In cases of lateral and transverse hermaphrodism, the question of surgical interference might arise and be one of great perplexity. But, in our opinion, everything reasonable should be done to render a human being capable of reproducing its kind in one way or the other; and other things being equal, preference should be given to the operation which will make the individual a male, as being more likely to procreate in

*These remarks were made relative to a case (Am. J. M. Sc., Oct. '52, p. 386) in which Dr Gross removed the testicles. The person grew up with girlish likes and proclivities.

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spite of a physical defect, and more able to support himself when arrived at adult life. (We might add, that there are already more females than males in the world.)

In the chapter on Life Insurance, Mr. Tidy says: "As the *law* stands, *intentional suicide*, whether by a sane or by an insane person, vitiates the policy." But who shall determine, with regard to the suicide of an insane person, whether the act was intentional or not? Who can say that an insane person really intends to commit self destruction when he fired the fatal shot or cut his throat? The presumption is that he did not know what he was doing, and the author very rightly holds, that "if death be the result of disease, whether affecting the *senses* or the *reason*, the insurance office is liable under the policy."

As regards the means of distinguishing burns inflicted during life from those produced after death, or from the effects of post-mortem change, he says: "Two points are certain and may be disposed of at once:—(1.) If a body be found completely charred or roasted, it will be impossible to say whether the *primary* application of the fire was to a living or to a dead body, seeing that a living body cannot be charred. (2.) If the presence of granulations are well marked on a burn, more especially if proud flesh, or if pus or gangrene are found on the burnt portions, these may be regarded as proof positive that the sufferer lived for some time after the burn had been inflicted." There are two specially marked characteristics of burns, produced during life, provided there has been no destruction of tissue:—(1.) The line of redness, and (2.) The formation of blisters. The line of redness is a true line of demarcation between living and dead tissues; but the author says that its absence is not positive proof that the burn was inflicted after death, nor its presence that it was inflicted during life; yet it constitutes the strongest possible presumptive evidence as to the period when the burn occurred. As to vesication, having made experiments on some twenty-eight bodies, he concludes: (1.) In some cases blisters may be produced by the application of flame, boiling oil, and molten lead, but not with boiling water. (2.) Blisters could not be produced on an amputated limb later than thirty minutes after its removal. They were produced on dead bodies, however, in two cases as late as eighteen hours after death. (3.) The majority of these post-mortem blisters were found to contain no fluid whatsoever; in a few cases there was a small quantity of thin watery fluid, containing a trace of albumen only. (4.) In the bodies of those who had

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died with well-marked dropsy, serous blisters could always be produced, and at almost any period after death, but this serum was thin and watery, rarely tinged with blood, and contained but a mere trace of albumen. (5.) Even in dropsical subjects, the application of boiling water would not produce a blister unless it was poured for some minutes on the same spot, and not always even then. (6.) In no case of a post-mortem blister was there any indication of a line of redness, nor of a reddened cutis vera after the removal of the cuticle. (7.) The experiments entirely confirm the observations of Chambert, that the serum exuded in a blister formed during life is thick and rich in albumen.

With regard to combustibles and explosives (Chap. XI), the medical jurist may be consulted in cases where persons charged with incendiarism set up the plea of spontaneous combustion, or where a ship and cargo are said to have been consumed by such combustion; where action is brought to prevent the storage of certain substances on the ground of their liability to such combustion, or respecting the cause of explosions. Even the spontaneous combustion of the human body has been alleged. Certain organic substances, packed while damp, as is well known, frequently ignite spontaneously. Such are hay, cotton, flax, oats, esparto grass, jute, etc. Dry silk and wool are believed to have ignited spontaneously. Organic substances moistened with oil are more liable to ignite in this manner than when damp. Mr. Galletly determined by experiment that cotton mixed with seal oil underwent spontaneous combustion in 100 minutes; with boiled linseed oil in less than two hours; with lard oil, four hours, etc. Sperm oil did not even char the cotton waste. The author mentions a case in private surgery in which the contents of a drawer, consisting merely of a few greasy rags, ignited. His opinion of the spontaneous combustion of the human body is—that there is no such thing—there being no case on record:* but he says that the bodies of habitual drunkards, more especially if corpulent, are more than ordinarily inflammable, and slight accidents might lead to the ignition of the body and its destruction by burning.

In Chapter XII—the last of Vol. I—two pages are given to a detailed description of the post-mortem appearances indicative of starvation, and several others to an enumeration of the diseases caused by deficient diet.†

* For a very curious case, apparently of spontaneous combustion, see *Am. J. M. Sc.*, Nov., 1835, p. 266.

† For a very remarkable case of abstinence, see *Am. J. M. Sc.*, Nov. 1837, p. 250.

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It is almost impossible, in a short review, to mention the good qualities of a book and at the same time to remark on its salient features. Indeed few authors could crowd together so many good points and so much valuable information into 636 pages, as Mr. Tidy has done. His book shows great research, rare analytical powers, and a variety of information seldom possessed by a writer; nor should we omit to say that though not faultless in his English, he at least wields his pen more gracefully, and certainly more correctly, than ninety-nine of every hundred authors who attempt to use it. Mr. Tidy's work will undoubtedly become *the authority* on medico-legal subjects, that is, if the volumes yet to appear fulfill the promise of the first. The paper is good and thick, the typographical errors are very few, but we are surprised that so noted a firm should not have bound the book better.

WM. G. E.

Editorial.

Errata.—On issue of the April No., we were horrified at the many uncorrected typographical errors in Dr. Harris' valuable paper on "Typhoid Fever," which was requested for publication by the Piedmont Association, which unfortunately went to press without proof correction. In the first line, change "our" into *one;* last line of page 20, read *Murchison;* next to last line of page 21, after "Casanova," insert a comma, then *Fauquier;* line 10, page 22, read *mill-dam* for "mile down"; line 23, same page, read *fell* for "falling;" line 34, same page, omit "he;" next line, change "store" into *stove;* line 21, page 23, after "cases," insert *being;* line 10, page 24, omit comma after "believes"; same page, line 25, insert comma after "succession"; same page, last line, change "numbers" to *members;* line 8, page 25, change "purging" into *freezing;* line 18, same page, after "place," insert *for the sick room;* four lines below, expunge "to be"; line 28, same page, spell under with an *r*; page 26, line 12, low case *c* in *contra;* page 27, line 3, for "enbrocation," read *lubrication;* page 28, line 1, petrefied, instead of "petrified;" insert ? after last word of next to last sentence on same page.

Owing to the lengthy, but valuable articles, calling for immediate publication, much valuable matter has been left out of this number.

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VIRGINIA
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Original Communications.

ART. I.—**Some Remarks on Sexual Excesses in Adult Life as a Cause of Impotence.*** By WILLIAM A. HAMMOND, M. D., Surgeon-General U. S. Army (Retired List); Professor of Diseases of the Mind and Nervous System in the New York Post-Graduate Medical School, New York, N. Y.

Sexual excesses in adult life, though often leading to impotence more or less permanent in character, are not so certain to result in that condition as those which are practised before the age of puberty, or before the body has attained to maturity. Still, cases of the kind are common enough; and undoubtedly the fact that almost every man who indulges in sexual intercourse does so to excess, is the cause of the supervention of impotence at an age when the individual ought to be in the full possession of all his powers. It is no uncommon thing to meet with men of fifty, forty, or even thirty years of age, whose desires are as strong as they ever were, who are absolutely incapable of intercourse, or else possess the faculty in a very faint degree, and in whom the existing condition is clearly the result of excess.

It often happens that excess is committed without the individual being at all aware that he is exceeding the normal

* From a forthcoming work on "Sexual Impotence in the Male," to be published by Bermingham & Co., New York.

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limits. The question then arises, what is excess? There are men who think it entirely within bounds to have intercourse once every twenty-four hours; others, again indulge regularly twice a week, others once, still others who think once a month sufficient. It is exceedingly difficult to lay down any rule in the matter which will be applicable for all men; indeed the task would be insuperable, for all men are not alike, and what would be excess for one would be moderation for another. But it may be said unhesitatingly that intercourse to the extent of once every twenty-four hours is excess for the strongest man who ever lived. There are many who can practise it without marked deterioration of their powers for several years, but the time inevitably comes, in advance of the normal period of diminution of power, when impotence begins to make its appearance. Twice a week is certainly excess for the majority of men, and will certainly lead to earlier than normal extinction of the sexual powers. Once a week is more generally applicable, and can as a rule in healthy men be taken as a guide from the twenty-fifth to the fortieth year. Previous to the twenty-first year sexual intercourse should not be practised at all; and between that age and twenty five, if indulged in, it should certainly not be more frequently than once in ten or twelve days; and it is a law to which there are no exceptions that the greater the excess the sooner will the natural power be lost. If the individual desires to retain his ability to a green old age, he will not tax it too severely in his youth.

That the civilized man is, in general, excessive in the matter of sexual intercourse admits of no question, and we see the effects constantly in the early loss of the power. The reading of obscene books, the witnessing of sexually suggestive plays, the very impediments which society necessarily places in the way of the unrestrained indulgence of the passions, act with some men as direct excitations to sexual indulgence. In civilized communities it will always happen that such causes act with much greater force than among savages, where, in fact, they are scarcely exhibited at all, and where the promptings of nature are alone the incentives to the act of copulation. The consequence is that, other things being

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equal, the civilized man becomes impotent at a much earlier age than his uncivilized brother.

How many men of sixty years of age in the city of New York are capable of natural and satisfactory intercourse? Not one in twenty; and yet the power ought to be retained, and is in the cases of those who have been temperate in its use up to, and even beyond, the age of three score and ten. Indeed, it is rare to find a man of fifty who has so husbanded his powers as to admit of his having sexual intercourse once a fortnight, and then the act is neither satisfactory to him nor the recipient. But at times a more serious evil than the comparatively early decay of the sexual power is observed as the consequence of excess; and this is the supervention of impotence either suddenly, after some extraordinary indulgence, or more gradually, in consequence of repeated excesses. In these cases, the desire remains in as active a condition as it ever existed. Attempts at intercourse are made; these fail. Renewed efforts are made, with extraordinary excitants to erection; but all in vain, the penis remaining limp and flaccid to every normal and abnormal stimulus, and the condition becoming more profound with each failure.

The effect is by no means restricted to the generative organs. The patient becomes morbid, both from chagrin—which follows his futile attempts at intercourse—and the apprehension, which is generally entertained, that some serious mental disease—insanity or imbecility, for instance—will result from the "softening of the brain," which he thinks has taken place, or is about to be produced. Besides this, he is the subject of regrets and remorse for his past offences against the laws of his being, and is just in that frame of mind which makes him an easy prey to the wiles of quacks and other medical imposters. He therefore runs from one to the other of these knaves and frauds: mesmerizers, clairvoyants, "natural healers," anatomical museums, layers on of hands, faith-curers, etc., etc., in the vain search for something that will enable him to recover the power he has lost, with no other result than to deplete his pocket, in the meantime making constant attempts at sexual intercourse by experimenting with one woman after another, and always with the same issue—failure.

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A careful examination of these cases, and full inquiry into the circumstances attending the condition, reveal the facts that there has been no erection at all, or else so feeble a one as to render the intromission of the penis into the vagina an impossibility. Sometimes an emission of semen has taken place, but this has been external to the vulva, and has only served to render the state still more deplorable; for it has occurred without an erection, and only as a consequence of the extreme debility of the whole generative apparatus.

And this brings us to the consideration of that *partial impotence* which is one of the most frequent results of sexual excesses, and in which the erection is so feeble and the erethism so great that emission and an imperfect orgasm ensue either before an entrance has been effected, or so soon thereafter, that the act of intercourse is unsatisfactory to both parties. This condition is often preliminary to the more complete loss of power; and again it may continue for an indefinite period, or may disappear under treatment.

In other cases there is an erection, and the individual thinks, till he learns better by experience, that there is going to be no difficulty in accomplishing the act of sexual intercourse; but just as the attempt is made to effect entrance, although there may be no loss of desire and no mental difficulty in the way, the penis becomes flaccid, and again disappointment is the result, there being no emission and no orgasm.

These states of partial impotence are very common, especially in those persons who have arrived at middle age, but in whom normally there ought to be almost as great a degree of power as there ever was. For it is to be noted that when in the course of advancing years the period is approaching which, according to physiological laws, the individual may expect to undergo the natural loss of sexual power, which is the common lot of all men, the failure is shown, not by any imperfection in the act, but by the healthy demand for its repetition coming less frequently. Besides, in this physiological impotence the desire disappears *pari passu* with the power, and the individual accordingly yields gracefully to the merciless law of his being. In that impotence, however, which is brought about by the imprudence

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of the individual in committing the act of intercourse more frequently than he ought, or with extraneous accessories, which heat the imagination for the time being and leave it a blank thereafter, the desire often remains unimpaired, while the power is diminished or altogether lost, and there are consequently regrets, chagrins, disappointments, and a constant state of warfare between the flesh and the spirit. It may be laid down as a law, to which there are few, if any, exceptions, that whenever there is desire, without full power, the resulting impotence is a veritable disease, and not a physiological condition coming in the regular course of life.

In regard to the character of the excess that may result in complete or partial impotence, it is generally, though by no means always, in adults, sexual intercourse rather than masturbation. The latter is more especially, as we have seen, a habit of childhood and youth, though there are many men who practice it to the exclusion of sexual intercourse, or in connection therewith. In all these cases the same remarks may be made in regard to it as were made in the previous chapter, with the additional observation that it is equally as destructive to sexual power as as it is to sexual desire—not, however, from any circumstance inherent in the act itself, but because it is certain to be more frequently repeated than it is possible generally to repeat the act of intercourse.

In addition, some men who find themselves impotent in all attempts to perform the sexual act, not from lack of desire, but from failure of power, are very apt to enter upon a systematic course of masturbation, a proceeding in which, to a still greater degradation of the sexual instinct and abolition of power, an emission and orgasm can be procured without erection.

The same plan may be adopted by elderly men in whom natural desire and power have faded, but who re-awaken both in an imperfect degree by lascivious practices of various kinds, or even by indulgence in libidinous thoughts. These cases are among the most lamentable that come under notice, especially when the act is practised so frequently and under such very disgusting accompaniments or excitants as tend to the production of various affections—such as epilepsy or

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cerebral hemorrhage, for instance—of the nervous system. I have had under observation the case of an old man of seventy-three, who every afternoon had two young girls visit him, and practice buccal masturbation upon him one after the other, with scarcely a quarter of an hour's interval. Upon one occasion on which the proceedure was being effected he suddenly became paralyzed on one side, and deprived of the power of speech as the result of the rupture of a blood vessel in his brain.

In another case the patient, a man of over seventy, was affected with paralytic tremor, due probably to disseminated sclerosis of the brain, which was clearly the result of excessive masturbation, of which he had been guilty for several years. In this instance, the appetite was unnaturally excited by lascivious books and pictures; and although he never obtained an erection, he succeeded by this system of overstimulation in causing such a state of erethism that an imperfect emission and orgasm were produced. One day, while engaged in the act, he experienced a slight sensation of vertigo, and at once tremor began in the right hand. This became more severe, and gradually extended to the other hand, and the head and neck. Eventually both legs were similarly affected; and now he walks with a festinating gait, and is evidently passing into a state of senile dementia.

In my experience, in every case in which masturbation is practised to any considerable extent—and excess in these cases is the rule—by persons in whom the natural desire and power are in a state of physiological decline, more or less injury of the nervous system is entailed, and the life of the individual is materially shortened.

Sometimes, however, it is the case that the tendency to such acts is the consequence and not the cause of the existing mental derangement. In several forms of insanity the proclivity in question is exhibited in an extreme degree, and constitutes one of the most distressing manifestations. Many of the cases of sexual depravity witnessed in old men are prodromata of senile dementia, and in younger persons of general paralysis.

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ART. II.—**The Hypodermic* Use of Sulphate of Morphia†.** By WM. H. COGGESHALL, M. D., Richmond, Va.‡

Of the many different instruments in use for the purpose of hypodermic injection of morphia, there is perhaps no one special pattern that is preferred by a large majority of practitioners. So long as the requirements of sharp point, smooth eye, free calibre of needle and close-fitting piston of syringe are fulfilled, all that is absolutely necessary to the practical value of the instrument is attained—all else being according to the fancy of the individual practitioner. I think most physicians prefer the glass barreled syringe covered with a fenestrated white metal encasement, as it allows the minim marking of the glass or piston rod to be plainly apparent, and yet is made sufficiently strong by the surrounding metal to withstand the ordinary shocks in practice without danger of breaking. The needles should be fully one and a-half inch long, so that they may be readily used in the deep insertions that are occasionally necessary, and of a sufficiently large calibre to prevent occlusion when a small grain of foreign matter is pressed into them by the piston, and to allow of their being easily cleansed by a "rimmer," or the accompanying wire.

It is always well to carefully examine the steel or aluminum point that is fastened on the needle, when about to use the syringe, as I have known of at least one instance where it became loosened and pulled off in the cellular tissue when the needle was withdrawn after an injection. In this case it was easily found and no evil results ensued; but I am of the opinion that this accident is of even more frequent occurrence than the breaking of the needle proper—several instances of which have been related—and the needle point might be left in a muscle after a deep injection, to give rise to serious trouble in the near future.

*Although the term *hypodermatic* is the more correct, and will probably soon come into general use, the writer employs the word *hypodermic*, as it is most commonly used at present.

†Notwithstanding the fact that the new Pharmacopœia of 1880 (Sixth Decennial Revision), has adopted the term "Morphina" (morphine), the writer has naturally made use of the old officinal form, "morphia," throughout the article.

‡Read before the Richmond Medical and Surgical Society, May 22nd, 1883.

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Too much importance cannot be given to the careful cleansing of the instrument after use, as tetanus has undoubtedly been induced by the employment of a rusty injecting needle. There is not the slighest reason for an accident from such cause, as forcing water (preferably warm) through the syringe and needle can always be readily done, both before and after their use. Some practitioners make it a rule to carry a little vial of carbolized oil in the syringe case, and endeavor to keep the interior of the needle coated with it by dipping the small brass wire in the oil before inserting it into the needle after cleansing.

No amount of care in preparing the injection for use can be too great. Undoubtedly one of the most convenient methods of giving morphia hypodermically is by means of the tablets or compressed pellets manufactured for the purpose. Each one contains the dose of morphia combined with one-fourth grain of sulphate of soda, and is prepared to dissolve in a given quantity of water representing one full injection. One of the main reasons preventing the general adoption of this method is that very often a thorough solution of the tablet is impossible. This is especially the case when the pellet or tablet has attained a certain degree of age; but except when the tablet is too old and hard, it is a fact that a careful warming of the solution in a silver spoon will generally completely dissolve the salts, which heating may be effected over the flame of a lamp or gas-jet or even, in an emergency, over a lighted match.

Not a few physicians make a practice of carrying a number of powders of morphia for hypodermic use, each powder comprising the exact dose, say one-eighth or one-sixth of a grain; and being dissolved in from fifteen to twenty minims of water, each one represents a quickly prepared injection.

For those who prefer the use of Magendie's solution, it is comparatively easy to prepare it in such a manner that it will remain good for months, by simply adding one grain of salicylic acid* or two drops of pure carbolic acid† to the

* The first public mention of the use of salicylic acid as a morphia solution preservative in this country was made by Dr. Joseph G. Richardson.—*N. Y. Med. Record*, Sept. 30, 1876.

† The writer has used carbolic acid in this manner since 1874.

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ounce of solution. I have kept a solution with carbolic acid in my desk for six months during a very warm summer, and at the end of that time have found no penicilium, algæ or other confervoid growths in it, and its hypodermic employment was followed by no more irritation or inflammation than if the solution had been freshly prepared. The quantity of carbolic acid in each injection is, of course, too small to give rise to any constitutional symptoms. The French members of the profession have, many of them, adopted Vidal's* suggestion and practice, as have also, I believe, not a few physicians in our own country. Vidal found that the addition of chloral to a solution of morphia effectually prevented the growth of confervæ, and by such means claims to have preserved a solution ready for use for many months. He adds twice as much chloral by weight as there is morphia, and is positive that the addition increases the general pain-quelling power of the injection. Chloral solution alone will frequently produce serious local inflammation, but Vidal and his followers assert that no such result is liable to follow the use of the two salts together.

It is somewhat surprising to read the experience of Dr. Taylor,† House Physician at Roosevelt Hospital, New York City, in 1882, who distinctly states that he has injected or seen injected at that institution, many solutions full of confervæ, and by means of uncleansed needles, without a single sequela of inflammation or abscess resultant from either cause. This experience is so diametrically opposed to the general belief on the subject, that, even though it was published with the sanction of Prof. W. H. Thompson, I am inclined to think that the profession generally are content to err on the precautionary side, and we shall probably continue our practice of making extra effort to avoid the use of a confervoid solution as we have in the past.

Strange as it may appear in the case of so active a poison as morphia, there is a considerable diversity of opinion as to the size of the general injecting dose of the salt. It would seem that when occasional instances of poisoning occur from

* Vidal of Hopital St. Louis.—*Bulletin de Therap.*, Paris,

† *N. Y. Med Record*, Aug, 26, 1882,

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the injection of from one-eighth to one-third of a grain,* it would behoove the conscientious practitioner to be content with the smallest amount possible to relieve his patient; but what are we to think of the physician who regularly uses from one-half to one grain at each injection? That such doses are used, it is useless for any one who reads the medical literature of the day on the subject to deny; and the most rational explanation of the immunity from grand jury indictment that such practitioners have so far enjoyed is that an overruling Providence has kindly afforded them a special beneficent protection; for as far as our present knowledge goes the practice is opposed both to clinical experience and common sense. I believe it is the general practice to rarely use over one-eighth of a grain for an initial dose, save in exceptional cases, such as peritoneal inflammation, severe acute neuralgias, acute mania, and in cases of poisoning where a strong antidotal effect is desired.

The use of morphia combined with atropia is of late years becoming very common, and there are certain reasons why the combination is extremely valuable. Nearly all authorities agree that the addition of atropia to a morphia solution increases the hypnotic effect of the latter, that it prolongs as well as augments its pain-quelling power; that it prevents to a certain degree the constipating tendency of morphia, and that it diminishes the gastric disturbance and nervous prostration following the injection of that drug, but that both have the same effect upon the bladder in producing dysuria. It is only fair to mention here, however, that some few writers adopt the position taken by J. Hughes Bennett,† who does not believe that the addition of atropia has any other effect than to increase the hypnotic and analgesic qualities of morphia, and Professor T. Gaillard Thomas,‡ of New York, will not allow that it has even that effect. From my

* Fatal doses—8 milligrammes, or ⅛ gr. morph. sulph. Robert Edes—*Therapeutic Handbook of the U. S. Pharmacopœia*, N. Y., 1883. Case in Washington, D. C., ⅓ gr. morph. sulph.—Kane, *Morphia Hypodermically*, N. Y., 1880, p. 160.

† *Brit. Med. Jour.*, 1874, Vol. II., Report of Com. of Brit. Med. Assn. on Use of Morphia Subcutaneously.

‡ An oral statement of Dr. Thomas to Dr. Kane. *Morphia Hypodermically*, N. Y., 1880, p. 250.

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own experience I am led to believe that the nausea and prostration usual after morphia injection is very much diminished by adding atropia to the solution. I add one grain of atropia sulphate to one ounce of Magendie, and, by the preservative means before spoken of, have no difficulty in keeping the solution always ready for use—the general injecting dose being five minims, equivalent to one ninety-sixth ($\frac{1}{96}$) of a grain of the belladonna alkaloid.

The question of whether a hypodermic injection should be locally given for relief of pain, or whether the same good effect is produced by an injection at some distant point on the body, is one on which doctors disagree exceedingly—Alex. Wood,* Eulenberg,† Behier,‡ Mitchell,§ Keen,‖ Morehouse,¶ Chouppe** and others believing fully in the doctrine of localization—while Anstie,†† De Renzi,‡‡ Charles Hunter,§§ Luton,‖‖ Bertin,¶¶ Ruppaner,*** Bartholow,††† Kane,‡‡‡ and I believe the great majority of the profession adhere to the opposite view. Many of these latter, however, qualify their assertion by making some few exceptions in cases of neuralgia where any of the larger nerve trunks are subject to morbid action. In such cases it is the almost universal practice to deliver the injection as near the precise seat of pain as possible.

I do not know if the idea is entirely original with me, but I am inclined to the belief that the sudden relief from pain experienced when a hypodermic injection of morphia is made directly over or near the painful point in neuralgia, is often due to the liquid vehicle of the injection, instead of the salt

* *Edinburg Med. and Surg. Journal*, 1855.
† *Die Hypodermatische Injection der Arzneimittel*, Berlin, 1865.
‡ *The Practitioner*, London, 1868, p. 35.
§ *Am. Journal Med. Sci.*, July, 1865.
‖ *Ibid.*
¶ *Ibid.*
** *Gazette Medicale de Paris*, No. 35, 1874.
†† *The Practitioner*, London, July, 1868.
‡‡ *La Nuova Liguria Medica*, February, 1873.
§§ *Speedy Relief of Pain, etc.*, London, 1865, and *Med. Times and Gazette*, London, 1868–9.
‖‖ *Etudes de Thérapeutique, etc., Injections Hypodermiques*, Paris, 1882.
¶¶ *Archives Générales*, Paris, 1867.
*** *Hypodermic Injections*, Boston, 1865.
††† *The Hypodermic Method*, Philadelphia, 1882.
‡‡‡ *Morphia Hypodermically*, N. Y., 1880.

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or alkaloid dissolved therein. Is it not possible that the water infiltrated into the cellular tissue, and even into the histological elements themselves, may produce a nerve impression which benumbs the pain for a limited time? Of course this sedation can only endure while the hydration continues; but before the histological elements or ultimate nerve cells have recovered from the shock of hydration, the morphia has entered the general circulation and the analgesia is taken up and carried on in a different manner by another agent.

Another point of difference between experimenters is, as to whether morphia injected into one portion of the body is taken up into the general circulation any more rapidly than when introduced into another—I mean, of course, when a local effect is not desired. Some, like Bartholow, are "unable to observe any difference in the rapidity of the effect as influenced by the site of puncture,"* while others agree in the main with Kane, who found "absorption from the groin and inner side of arm to rank first in point of rapidity; forearm next, leg next, abdomen next, and the thick tissues of the back last."†

There is also an extreme diversity of opinion among practitioners concerning the relative innocuousness of deep and shallow injections. One class of physicians consider that their only safety from inflammation and abscess (given a pure non-irritant solution), lies in deep deposition of the solution from half an inch to even more than an inch beneath the cuticle; whilst others announce that their worst cases of inflammatory sequelæ have been where the injection has been made too far below the surface of the body. I am of the opinion that with a perfectly pure solution, and careful attention to the cleanliness of the syringe and needle, a hypodermic injection can be placed in any subcutaneous tissue with almost perfect security from serious inflammation, always provided, of course, that no blood-vessel or nerve is injured by the needle point. Care must be taken, however, that the injection is made *subcutaneously*, as an injection

* *The Hypodermic Method*, Philadelphia, 1879.
† *Morphia Hypodermically*, N. Y., 1880.

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into the skin itself is almost certain to be followed by phlegmasia.

Occasionally an individual is found in whose cellular tissue an abscess is sure to follow an injection, without reference to his general state of health, and all precautions usually successful in preventing such result are entirely futile. What the predisposing cause may be, producing such idiosyncrasy, is something not yet explained, and, unfortunately, it is impossible to know before giving the injection whether or no a patient belongs to that class. The number of persons who cannot receive a hypodermic injection without abscess surely following, is greater, I think, than is generally believed, as I have seen nearly a dozen in twelve years of ordinary private practice.

During that period I have sometimes met with a patient whose dread of the pain of the needle's introduction was carried to so great a point, that it was impossible to use the syringe even when positively indicated, until local anæsthesia had been established, and although I have used an ether spray when I had one at hand, I have found an application of a bag of pounded ice, with a little salt, fully as efficacious on an emergency, as it lowers the sensibility of the part to a sufficient extent.

There is, of course, the same peculiarity as found in the action of most medicines, of different patients requiring different hypodermic doses of the alkaloid for relief of the same conditions of disease, and also receiving dissimilar effects from the same dose; but the majority of patients a physician in general practice meets with, seldom require more than one-eighth of a grain to begin with, and that first dose as a rule has the worst effects—nausea, vomiting, and nervous prostration, often following the first small injection of morphia, even when the patient is not afterward affected in that manner by the same sized dose.

The occasionally distressing urticaria following especially the first few injections in a patient, I have only been able partially to relieve by fomentations of very warm water slightly acidulated by the addition of vinegar; but I think

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that the potassium bromide* administered *per orem* just before the injection, has prevented its appearance in a few cases.

As to the hypodermic use of morphia in childhood, my own experience does not allow me to speak; but writers on the subject generally have mentioned its value in special cases, making a rule that the dose should never exceed one-sixteenth ($\frac{1}{16}$) of a grain, and should usually be exhibited in even smaller doses. The susceptibility of children to the toxic action of opium and its salts is too well known to be worth dilating upon.

I have noticed that thin, dark-complexioned persons of either Southern or Semitic races usually require more morphia to affect them hypodermically than the fresh, rosy, light-complexioned individuals who are more common among our Anglo-Saxon race.

Another point to be regarded in the hypodermic administration of morphia is, when circumstances require closely continued injections of the alkaloid, it is well to keep careful watch upon the respiratory organs; for, although the number of respirations have diminished in frequency to as low as four or five per minute, under the use or abuse of this salt, with ultimate recovery: yet it is seldom safe to allow them to go below ten per minute; and it may be remarked that if a patient in his senses calls attention to the fact of feeling something like "cobwebs" on his face, it may be understood that he has received all of the alkaloid he can safely be allowed.

In this connection it is necessary to call attention to a most important practical point in relation to the hypodermic employment of morphia. It may be laid down as a rule that *it is never safe to administer a hypodermic injection of this salt after a full dose of opium or morphia has been given by the mouth.* Several cases of death have undoubtedly occurred where a dose or doses of opium, or one of its salts, have been administered *per orem* and for some reason, such as a condition of shock, the previous ingestion of a full meal, etc.,

* DaCosta—*Am. Journal Med. Sciences*, 1870 and 1871.

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stomach absorption has been delayed, and soon after a full subcutaneous injection of the alkaloid the previously delayed absorption has begun in the stomach, and the cumulative effect of the poison has been manifested, and fatal narcosis produced. One of the most noted instances of this was the case of James Fisk, Jr.,* in New York, January 7th, 1872.

When an injection produces more than ordinary inflammation at or around the point of entrance, I have used either hot or cold water compresses, as they were best borne by the patient, either proving amply sufficient, save in the abscesses of the idiosyncratic class, where general treatment for common suppurative tissue is called for, and in one or two cases of that class the list of local and systemic remedies required has proved a lengthy one.

It is a curious fact that several cases of death have occurred from hypodermic injections given on the head and face; and although every writer on the subject feels called upon to warn his readers of the danger of such practice, few or none attempt any rational explanation of the matter.

Too rapid absorption of morphia injected subcutaneously gives rise to a peculiar train of symptoms that is agonizing in the extreme to the patient, as well as unpleasant to the medical attendant to behold; and for such reason too many precautions cannot be taken to prevent an accidental injection into a vein, especially if the dose of the alkaloid is at all large—although the size of the dose is not always required to be larger than normal to produce the most distressing results. The venous absorption brings about not what one would naturally expect—narcotism,—but an instant overwhelming of the vital powers: what might be designated an excessive nervous and vascular shock. The instant the injection is made, there ensues first a peculiar metallic taste in the mouth, accompanied sometimes by an aching of every carious tooth in the head, and a most intense irritation and prickling is felt in the skin all over the body, which is apt to be suffused with a dark redness. Swelling of the subcu-

*Dr. Eugene Peugnet's "Papers of Medico-Legal Soc. of New York," 1882, p. 294.

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taneous tissues is extreme, particularly those of the hands and face, so that the patient's features are almost unrecognizable; the heart's action is very much increased, and a throbbing or "hammering" begins in the head, which increases until it is almost unbearable. The head-throbbing is succeeded by a congestive cephalalgia, which for the time seems beyond endurance; but fortunately just before the apparently approaching bursting of the cranial blood-vessels, the severity of the symptoms begins to abate, and a few hours rest restores the sufferer to the normal condition, less so much vitality expended.*

This is the history of a severe non-fatal accident; but where the patient suffers from an organic cardiac lesion, or where there is a general want of strength in the heart-muscle, he will surely succumb under the symptoms related; and when morphia is thrown directly into the circulation in this way, it may be laid down as a rule, I think, that if the patient can be carried safely through the first ten minutes he is sure to recover.

The first case of an accident of this kind occurring in my practice I treated by stripping the patient to the waist, and dashing cold water over his head and spinal column, which resulted in rapid recovery. My other case was that of a lady, whose sex effectually precluded me from such violent measures, and for whom I used successfully the general supportive treatment that naturally occurs to any physician—diffusible stimuli, digitalis, cold to the head, ammonia to the nostrils, etc.

It is recommended by Bartholow,† Kane,‡ and others, to withdraw the needle once after introduction, and notice if blood flows freely; if so, there can be no doubt, of course, about the puncture of a vein, and another point must be sought for injection; but in case no more than a drop of blood follows the withdrawal of the needle, it may be again introduced: all this provided one is not treating a nervous patient. I have read somewhere the statement of a physi-

* The reader will be interested in the picturesque account given by Chouppe, of the effect on himself of the absorption of morphia injected accidentally into a vein, in the *Gazette hebdomad. de Médicine et de Chirurg.*, March, 1876, p. 162.

† *The Hypodermic Method*, Phil., 1882. ‡ *Morphia Hypodermically*, N. Y., 1880.

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cian* who found that he could always know when his needle had entered a small vein, by the patient expressing a sensation of more pain than usually follows a hypodermic puncture; and although I can see no reason why it should be so—for certainly the coat of a vein is not supplied with sensory nerves to any greater extent than general subcutaneous tissue—yet it is a clinical fact, in my own experience, that whenever I hear a patient complaining of the sharp pain of a puncture, I find on withdrawing the needle that the blood flows freely, and therefore make the injection in another place.

The injection of air into the veins and cellular tissue by means of careless hypodermic medication, has probably often occurred, but the results are by no means commensurate with the fears expressed in the teachings of fifteen years ago. I do not believe there is any danger of emphysema in the subcutaneous tissues of the body from such introduction of air, as I recall the case of a patient in charge of an old practitioner some years ago, who received into his biceps muscle an entire syringe-barrel of air, which the physician, who was in one sense a disciple of Paul, injected under the mistaken impression that it was a dilute solution of morphia; and I can well remember the surprise of those of us in the secret, when we found no emphysema or other bad result following. Dr. H. H. Kane† has been experimenting as to the danger of injecting air into the veins; and finally, taking all proper precautions, he injected into the median cephalic vein of his arm twice as much air, with warm water, as he judged would be likely to be contained in the bubble of air one sometimes sees in a hypodermic injection while still in the syringe, and experienced no effects whatever, either unpleasant or the reverse; but on injection of one sixteenth ($\frac{1}{16}$) grain of morphia in solution into a vein, the series of symptoms before given instantly occurred. The hypodermic use of morphia is far preferable to its employment *per orem*, because of the rapidity of its effects upon the system,‡ and because it is much

* Mr. Arthur Roberts, in *Medical Times and Gazette*, Jan. 11, 1868.

† *Morphia Hypodermically*, N. Y., 1880, p. 130.

‡ Bartholow, in his *Hypodermic Method*, Phila., 1882, p. 63, c requires less than one minute to make the round of the circulat fairly enters, and the utmost limit of delay possible for the begi temic effects of subcutaneously injected morphia can be safely pl

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less likely to produce gastric irritation and impairment of the digestive organs, and can be used where deglutition is unpleasant or impossible; but if we grant that it has no specific local action in itself, it must be employed precisely for those reasons which are generally applicable to the use of the alkaloid, and therefore we administer it hypodermically to calm pain, to produce sleep, to allay general irritation, to produce relaxation of the muscular system when in spasmodic condition, and to arrest exhausting discharges.

Ott* says "it produces sleep partly through the contraction of the capillaries of the brain, and partly through an action on the constitution of the molecules of nerve matter;" but it appears to me that if the general opinion that it relieves arterial tension is correct, a general dilatation of blood-vessels must ensue, and it is hardly possible that a physician can stand by the bedside of a morphia narcotized patient, and believe that the capillaries of the comatose man's brain are contracted.

That Ott is correct in teaching that it has a peculiar action on molecular nerve matter we can readily affirm, as it is from such action that much of its sleep-producing and pain-quelling power is derived. It slows down the heart's action and stimulates the functions of the spinal cord; and on consideration of these few reasons it is not difficult to understand why the salt is so valuable in the hands of the careful physician.

In facial neuralgia, sciatica, lumbago, brachialgia, passage of biliary or renal calculi, in carcinoma—in fact, in any and all forms of acute suffering, the hypodermic injection of morphia, either alone or combined with atropia, will often cure the paroxysm, and will always give relief. Its action in such cases is by deadening the receptivity of the nerve-centres to impressions, and introduced subcutaneously will perform such work quicker, better, and with less unpleasant effect than when administered in any other manner.

In epilepsy, Brown-Séquard† was the pioneer with the hypodermic syringe, and he finds that morphia in this way not

*_The Action of Medicine_, Philadelphia, 1878.
†_Archives de Physiologie Normale et Pathologique_, Paris, 1868-1872.

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only relieves quickly the paroxysms in violent cases, but affords permanent benefit by diminishing the number, frequency and severity of succeeding attacks, disputing with potassium bromide the foremost position among remedies against the disease; and Bartholow* believes that it is not proper where there is cerebral lesion, but is decidedly preferable to any other drug in night paroxysms, in the *petit mal*, and in convulsive *tic*—his practice being to inject during the attack when the paroxysms occur rapidly in succession and are violent, but ordinarily one-fourth of a grain two or three times a week is sufficient.

In eclampsia—both simple and puerperal—the hypodermic employment of morphia is indicated, according to Scanzoni,† Lander,‡ Lehman,§ Lorent‖ and Bartholow.¶ The best results in suspending the morbid reflex excitability are produced by small doses, seldom exceeding the one-sixteenth ($\frac{1}{16}$) of a grain. I have personally had occasion to adopt the method in one case of this disease occurring in a child three years of age, after exhausting the ordinary means of medication commonly used, and found the happiest results ensuing on the exhibition of one-twentieth ($\frac{1}{20}$) of a grain.

A great deal has been written concerning the danger of giving morphia hypodermically to pregnant women, by reason of the supposed abortive effects following such medication; but case after case has been placed on record in which Magendie's solution has been used especially for the relief of the peculiar facial neuralgia so common to the obstetric condition. Storer, Barker, Peaslee, Lusk and Glisan** find no harm resulting either to mother or fœtus from the use of morphia hypodermically when indicated during pregnancy, Thomas and Gillette to the contrary notwithstanding.

In peritonitis, especially that form sometimes coexistent

The Hypodermic Method, Philadelphia, 1882.

†Scanzoni of Wurtzburg.

‡Quoted by Erlenmeyer, *Die Subcutanem Injectionen*, Leipsic. 1866.

§*Ibid.*

‖*Die Hypodermatischen Injectionen nash Clinischen Erfahrungen*, Leipsic, 1865.

¶*Hypodermic Method*, Philadelphia, 1882.

**Lusk *Science and Art of Midwifery*, N. Y., 1882, p. 121. Glisan *Text-Book of Modern Midwifery*, Philadelphia, 1881, p. 228. Storer *Naphey's Mod. Med. Therapeutics*, Philadelphia, 1878, p. 107.

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with the puerperal state, the hypodermic method undoubtedly offers, by all odds, the most trustworthy manner of administering the "sheet anchor."

For relief of the distressing nervousness, dyspepsia, pain and night-terrors of advanced cardiac disease, there is nothing to be compared with the subcutaneous exhibition of morphia; and Dr. Clifford Allbut,* of London, is especially in favor of its use in angina pectoris with diseased coronary arteries, neuralgic distress from intra-thoracic tumors, aortic disease, and in mitral regurgitation where the heart is large and laboring hard. In such cases he prefers to administer the injection at night, and enjoins the most perfect rest and quiet. He thinks that there is no other drug with which he can so readily tranquillize the heart, and by allowing the circulation to recover its freedom the vascular system is permitted to return to its normal balance.

For the relief of paroxsyms of emphysema, asthma, and, in fact, all forms of dyspnœa, subdermal injections of morphia are indicated. By reason of the peculiar power the alkaloid possesses in depressing the respiration, it no doubt blunts the sensibility of the respiratory nerve centres, thus reducing the number of respirations per minute and necessarily making them deeper and longer—thoracic respiration especially being made more regular.

In the early stage of pleuritis, morphia hypodermically seems to act specifically, as it quells the sharp pain, and diminishes, often completely arresting, the morbid process. Napheyt especially recommends this treatment, advising that if the disease has passed beyond the first stage, injections should be continued up to the time of exudation.

Loomis‡ and Bartholow§ both believe in the general efficacy of this mode of treatment for pneumonic affections, and the latter makes the bold and positive statement that he has aborted attacks of pneumonia by means of morphia subcutaneously—not once or twice, but several times; and re-

*_The Practitioner_ (Eng.), Dec. No., 1869.
†_Medical Therapeutics_, Philadelphia, 1879, p. 211.
‡_Diseases of the Respiratory Organs, Heart and Kidneys_, N. Y., 1875.
§_Hypodermic Medication_, Philadelphia, 1882.

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commends its employment as soon as the diagnosis of the disease is established. He says: *"To be successful, it is essential that a full dose (¼ to ½ gr.) be given just as the preliminary congestion is developing."

There is yet a considerable difference of opinion as to whether it is a safe plan to use morphia in albuminuria; but with such authority as the practiced diagnosticians and therapeutists, Loomis,† Edes,‡ and Bartholow,§ on the affirmative side of the question, the alkaloid will probably come into use in this disease. Prof. Loomis‖ finds, from clinical observation, that hypodermic morphia is valuable in uræmia because the salt counteracts the effect of the uræmic poison on the nerve centres, its general action is to produce extreme diaphoresis, and it facilitates the action of diuretics and cathartics, thereby becoming a powerful eliminating agent, sufficiently so at all events to control the convulsions—his dose being one-half (½) a grain, repeated if convulsions continue¶

In insanity, the use of morphia hypodermically receives encomiums from all who have given it a fair trial—Voisin** of the Salpêtrière, Charles Hunter,†† Kraft-Ebing,‡‡ Mandsley,§§ Mackintosh,‖‖ Eulenberg,*** Robertson,††† and Bartholow‡‡‡ are but a few of the eminent practitioners who make special notice of its value in many forms of dementia. By

Op. cit., p. 104.
†Op. cit.
‡*Therapeutic Hand-book of the U. S. Pharmacopœia*, N. Y., 1883.
§Op. cit., p. 89.
‖*N. Y. Med. Record*, Vol. VIII, p. 361—Dr. F. D. Lente, the writer believes, was the first physician to publicly recommend this treatment for this condition, which he did at a meeting of the N. Y. County Med. Soc. in 1870. Prof. Ripley, of the New York Policlinic, recommends the same treatment in uræmic convulsions of children.—*N. Y. Med. Rec.*, May 5, 1883.
¶Flint in *Practice of Medicine*, Philadelphia, 1881, p. 871, allows the hypodermic use of morphia in uræmic convulsions, but not in toxic doses.
**Bulletin Générale de Thérapeutique*, Paris, 1874.
††*On the Speedy Relief of Pain and Other Nervous Affections by the Hypodermic Method*, London, 1868.
‡‡*Archiv für Psychiatrie und Nervenkraukheiten*, Vol. II.
§§Reynolds' *System of Medicine*, Vol. II, p. 60; and "Opium in Insanity," *Practitioner* Lond., Jan., 1869.
‖‖*Journal of Mental Science*, London, Oct., 1861.
***Lehrbuch d. Nerven-Kraukheiten*, Berlin, 1868.
†††*The Practitioner*, London, May, 1869.
‡‡‡*The Hypodermic Method*, Phila., 1882, p. 82.

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its action, relaxing the vascular tension, it allows freer access of blood to the brain for the nourishment of that organ, besides its peculiar specific effect on the nerve centres of the brain and spinal cord, and in the form of dementia known as acute mania its effects are oftentimes almost magical, especially in the first stages of that disease. It may be laid down as a rule, that morphia subcutaneously will commonly produce the best results in prolonged wakefulness, maniacal excitement, refusal of food and destructive and suicidal tendencies. Voisin and Bartholow deem it of special value in melancholia and insanity with hallucinations. It is contra-indicated in cases of general paralysis, and in cases of mental disorder complicated with tuberculosis, stomach disease, and rigidity of the arteries, in all forms of cerebral congestion, and in atheroma of brain, veins, etc. One of the curious facts in this connection is that the hypodermic doses in insanity must be larger than are usually given in other forms of disease, from one-half (½) to one grain constituting the initial dose.

Delirium tremens or mania a potu has been often treated successfully by morphia injections, especially in that stage preceding active delirium commonly known as "the horrors," and in conditions of the disease where there is not too great a depression of the vital forces. The drug is contra-indicated in this disease where there are serious organic lesions of the liver or kidneys, where there is great depression of vitality, and where the disease is consecutive to traumatic or other brain lesions. It must be remembered, however (and Anstie, in his admirable essay on "Alcoholism,"* calls particular attention to this point), that in some cases of delirium tremens there is an apparent tolerance of opium salts up to a certain point, and to a careless observer it might appear that more morphia should be injected when a reasonable amount fails to produce the desired effect of rest; but in several such cases the tolerant point has been reached unexpectedly, and the rest that ensued was not fully satisfactory to the family and friends of the patient.

*Reynolds' *System of Medicine*, Vol. II, pages 88 and 89.

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Through its power of relieving vascular tension, morphia hypodermically has proven of great value by restoring the warmth of the body in those cases where internal congestion exists, such as the chill of common intermittents, the paroxysm of congestive malaria and the cold stage of sporadic cholera; in short, wherever we wish for results produced by a loosening of the vascular tension, the most speedy means of accomplishing the desired end is by the hypodermic injection of a solution of morphia sulphate.

One of the most valuable and practical uses of morphia hypodermically is when employed in connection with the anæsthetic exhibition of chloroform, Claude Bernard* being the first to discover the great value of the salt so employed. The proper time for the hypodermic administration of the drug is just before the commencement of the inhalation (although Nussbaum† thinks it preferable to use it after analgesia has been induced); and by the injection the irritation of the air-passages commonly consequent upon the beginning of anæsthesia by chloroform is very notably diminished, the coughing and struggling for air so often seen in a patient being considerably lessened, and the chloroform narcosis prolonged with a smaller quantity of the anæsthetic than usually employed.

The protracted vomiting and general depression of the vital powers so often witnessed as the sequelæ of chloroform anæsthesia is very materially decreased by this method; in fact, Bartholow claims that it entirely prevents such condition, and he esteems it highly probable that this method will obviate the tendency to death by cardiac or respiratory failure during anæsthesia. After summing up the several material advantages to be derived from the hypodermic administration of morphia in this connection, he concludes by saying that "it seems incredible that surgeons will neglect so important an addition to their resources."‡

Morphia has been also hypodermically employed successfully in several instances of poisoning by drugs other than its physiological antipode, atropia, the different cases reported

* *Revue des Cours Scientifiques* and *Bulletin de Thérapeutiques*, Paris, 1869.
† *Bulletin de Thérapeutique*, Paris, 1864.
‡ *Hypodermic Medication*, Philadelphia, 1882, p. 117.

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in the medical journals of the past few years, comprising as the poisons, gelseminum, veratrum viride, stramonium and aconite, in most of which cases other means had been exhausted before the ultimately successful trial of the opium alkaloid.

I have not endeavored to give a full account of all the various conditions in which morphia, hypodermically, is indicated, but have only attempted to mention those which are likely to arise at any time in practice, or those in which such employment of the alkaloid is extremely valuable according to the best authorities.

Occasionally, in despite of all proper precautions, and sometimes, perhaps, for lack of most ordinary care, there will be needed suddenly the knowledge necessary for the restoration of a thoroughly morphia narcotised patient, and it is of the utmost importance that the means to be employed should be used at the earliest possible moment. The three distinct therapeutic efforts to be carried on at one and the same time, as far as practicable, are: (1.) To antidote the poison; (2.) To employ artificial respiration; (3.) To encourage respiratory effort and contraction of vascular tension by electricity. Under the first head, coffee, hypodermics of caffeine, flagellation, the cold douche, warmth to the extremities, fresh air, spiritus frumenti and ammonia hypodermically or intra-venously, etc., are all to be assisted by atropia, whose antidotal effect has been experimentally and clinically demonstrated to be made by lifting off the poisonous effects of morphia on the respiratory nerve centres, and by stimulating the action of the heart through the sympathetic, by such careful observers as Hughes Bennet,* Weir Mitchell,† Fothergill,‡ Radcliffe,§ H. C. Wood,‖ Bartholow,¶ etc.: notwithstanding that Brown-Séquard,** Harley†† and Austie‡‡ have denied the fact that this alkaloid

* *British Medical Journal*, London, 1874.
† *Am. Journal Med. Sciences*, July, 1865.
‡ *Antagonism of Therapeutic Agents*, Phila., 1878.
§ *The Practitioner*, London, 1878, and *Reynolds System of Medicine*, Vol. II.
‖ *Materia Medica and Therapeutics*, Phila., 1877.
¶ *The Hypodermic Method*, Phila., 1882.
** *Archives de Physiologie Normale, etc.*, 1860.
†† Gulstonian Lectures, *Brit. Med. Journal*, 1878.
‡‡ *Stimulants and Narcotics*, Phila., 1865.

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is in any manner an antidote for the salts of opium. The antidotal hypodermic dose of atropia is given by most writers upon the subject as being in the proportion of one-twenty-fifth ($\frac{1}{25}$) of a grain to one grain of morphia.

Of the several excellent methods for the production of artificial respiration, the one now known as the "modified Sylvester method" is, perhaps, the most valuable for use in opium narcosis, as it is certainly the most ready. The patient is supported in the sitting posture, and while the physician holds down his tongue, the assistants on either side raise his arms simultaneously above his head at an angle of about forty-five degrees, pulling on them enough to slightly raise the patient, thus expanding the walls of the thorax and causing the air to rush forcibly in, in this manner effecting inspiration; the arms are then depressed and brought down closely against the sides of the chest and abdomen, compressing the thorax sufficiently to expel the air from the lungs, thus producing expiration. To Dr. H. F. Campbell, * of Georgia, I believe, is the profession indebted for the first public mention of the successful employment of this modification of the Sylvester method in opium poisoning.

Either current of electricity may be used—each in its proper manner—probably the best method of assisting respiration being to make the circuit by placing one electrode on either phrenic nerve just above the clavicle and breaking the current the moment inspiration is completed, thus producing relaxation of the diaphragm. One pole at the medullary region and the other on the perineum, or over the epigastrium, or at the seventh intercostal space, has also been proven of great value, but any one at all familiar with the common use of the battery can do with it all there is to be done.

It is always well in these cases to remember the danger of lung congestion after relief of narcosis, and guard against it by never allowing the patient to lie any length of time in one position.

One of the most serious objections to be made to the hypo-

*Monograph, *Caffein as an Antidote in the Poisonous Narcotism of Opium*, Augusta, Ga., 1860.

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dermic injection of morphia (leaving out of consideration the always constant possibility of sudden opium narcosis) is the danger to be incurred of developing the opium appetite, and teaching the morphia habit; and the fear of this no doubt operates largely to prevent the more general employment of the syringe. Of course this is a danger to be considered and guarded against as much as possible: for there have undoubtedly been numerous instances where the careless consent given by the medical attendant to the frequent use of the drug during a painful acute attack of illness, has developed the peculiar desire for its continuance after recovery, and months after, when the unfortunate drunkard and his friends recognize his lamentable condition, the usual answer to the anxious inquiry as to the cause of the formation of the habit has been, "My physician taught me to use morphia when I was sick."

I am inclined to think that one of the best methods of prevention is to use exclusively (for frequent injection on the same patient) the combination of morphia with atropia before referred to. Another is, of course, for the physician never to trust his syringe out of his own hands for use; and added to the advice upon the subject, which no one knows how to give so well as the conscientious and practical physician, let it be known and shown how delicate and dangerous the operation for subcutaneous medication really is; and I believe that if I should discover that a patient of mine was becoming too fond of the use of the drug, I would risk giving him the one-sixteenth ($\frac{1}{16}$) of a grain by the intravenous method. If the symptoms following that dose did not put a quietus on all desire for hypodermic injection—and I have never been able to get a patient to undergo another injection of morphia after he or she had received it once by a vein—I should feel that I had performed my whole duty in the matter, and retire from the case with a clear conscience.

The treatment of the morphia habit already acquired is an entirely different matter, and having reached already the limitation of my paper, I propose to consider that branch of the subject at some future period.

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ART. III.—**Phthisis and the Means to Prevent It—Relation of the Bacillus to Phthisis.*** By M. A. RUST, M. D., Richmond, Va.

In the two former papers† I treated extensively of the relation of atmospheric air to respiration. Before proceeding in the consideration of this theme, I will cast a glance on the bacillus, on which our views in regard to phthisis now hinge. It is ten months since we first spoke of it when only the news of its existence had reached us.

In the minds of many the question still arises: *Is the bacillus a reality or a myth?* The first denial of its existence came from New Orleans, when Dr. Schmidt made, before the New Orleans Pathological Society, microscopic demonstrations, showing the pretended bacillus to be nothing but a fat crystal. For a moment we were in a dilemma; we had either to imagine that the bacillus was transformed in New Orleans into a fat crystal, or the fat crystal in Berlin into a bacillus. Similar miraculous transformations under the microscope have happened more than once. But we can hardly conceive Dr. Koch being imposed upon by a microscopic miracle; besides, we have heard nothing more of the fat crystal from any point, whilst the bacillus has been seen and studied all over the civilized world.

Amongst the other objectors to the bacillus theory, there is only a single voice which commands our serious attention. It is Dr. Arnold Spina's verdict which threatens to divest Koch's discovery of all its importance. Dr. Spina, after a series of extensive original investigations, arrives at the following conclusions:

1st. The bacilli discovered by Koch are to be found in tubercular lungs and in the sputa of the consumptive; albeit, similar organisms, not distinguishable from the former (rod-shaped bacterias) are met with in diseases which stand in no relation to phthisis.

2nd. By varying the methods, common bacterias can be made to react on aniline dyes in the same manner as Koch's bacilli.

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*Read before the Richmond Medical and Surgical Society, March 6, 1883.

† *Virginia Medical Monthly*, November and December, 1882.

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3rd. Atmospheric air being more or less laden with bacteria, it is obvious that they will penetrate the lungs and propagate under favorable circumstances. Were the bacilli the cause of tuberculosis, they ought likewise to be present in tuberculous organs which do not come in contact with the atmosphere; but such is not the case. No bacilli or bacteria could be detected in tuberculous organs inaccessible to atmospheric air.

In opposition to that one single dissentient voice, we hear a score of affirming ones, whose conclusions are based on the results of scrupulous investigations. We have to recall to our minds that the main characteristic which distinguishes the bacillus tuberculosis from other bacteria, is its behavior to aniline dyes and fuchsine. The speck of matter in which the bacillus is imbedded is first stained red or blue (by fuchsine or methylene blue), and, by a second process, again discolored. But this discoloration does not affect the bacillus, which retains the pristine dye. According to Koch, no other bacteria behaves in a similar manner. This dyeing process is a very delicate and difficult one, and is the source of the many failures and fallacies. Hence a number of scientists, principally Ehrlich in Vienna, Rindfleish in Wurzburg, and Gibbes in London—have endeavored, and to a certain degree succeeded, in devising simpler and safer methods; and we may hope that the day is not distant when the means to detect the presence of the bacillus will be in the hands of every physician.

From these introductory remarks you have already inferred that I am inclined to admit the reality of the bacillus. In doing so, I find myself in the best company. However further research may modify the conclusions we are at this moment drawing; these conclusions nevertheless help to explain what has hitherto been inexplicable.

For about eighty years phthisis has been studied scientifically. Forty years ago, Villmin convincingly demonstrated its infectiousness. With the progress of science, the problems and perplexities have increased, and a point was reached when we had to put the question earnestly, "What is phthisis?"

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The forms under which this disease appears are so manifold that some investigators believed themselves justified in carving out of it at least half a dozen different diseases.

Consumption is an extremely infectious disease, yet does not infect individuals in a normal state of health; it does not infect the normal organism, although it is more widely spread than any other known disease; it is more frequent and devours more victims than any other known plague or disease; nevertheless, there exists no disease of which we can show so many cases of spontaneous cure, or healing by self limitation, as we can of phthisis. It heals in an immense number of cases by self-limitation—yet, for all that, there exists no drug by whose action the disease has been, or can be cured, or checked in its course.

Since the discovery of the bacillus only twelve months have elapsed. In this short space of time, Koch and his co-laborers have made many valuable observations concerning the nature and mode of life of these minute organisms. With this fragmentary life-history of the bacillus before us, and assuming the views of these scientists to be correct, we will cast a glance over the field of the pathology of phthisis, and try to understand the relation of the bacillus to the development of the disease. It is obvious that only a few points can be touched on here, and even these may appear to you as premature speculations. I do not ask you to believe in this theory—in science we *should not believe*. In the scientific mind, a belief holds good only so long as supported by reason. And as no theory hitherto evolved is capable of explaining the incongruities and perplexities above mentioned so satisfactorily as the bacillus theory does, I hold to it, ready to drop it when better informed.

According to Koch, the bacilli present themselves under the microscope as minute rods from a quarter to half the diameter of a blood corpuscle in length—their thickness being from one-fifth to one-sixth of their length. They have no motion of their own. They are found in all organs where tubercles exist, especially in great number in the interior of the giant cells. They grow very slowly, and are supposed to evolve from two to four spores. When the tubercular pro-

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cess is at its height, they are found in the greatest number; when this process comes to a stand still, the bacilli are gradually dying out, and finally vanish altogether. It has been established by Koch and many other observers, that the number and degree of development of the bacilli are of great prognostic value.

Sometimes one meets giant cells devoid of bacilli. In such cases Koch thinks that the bacilli have perished, after having played a part in the formation of those cells.

Now casting a glance on the *pathology of phthisis*, I will refer to the first of this series of papers, in which I made a short summary of the prominent current views on this subject. In the face of the just announced discovery of the bacillus I was shy of pronouncing in favor of one or the other of the various contradictory, but equally weighty, opinions. What we have since learned abut the bacillus will help us to solve our perplexities.

If we cast a glance over the field of modern science touching this subject, two of the workers in it stand conspicuous before us—Villmin, of Paris, and Virchow, of Berlin. Villmin is the discoverer of the inoculability of consumption. His researches touch almost every point in the pathology of phthisis which has engaged scientific thought till this day. His numerous and extensive experiments are the parents of all subsequent ones from his time till the discovery of Koch. Virchow, with his two great works—"*Cellular Pathology*" and "*Pathology of Tumors*"—cast a new light over a very obscure and confused subject. The tubercle was defined as a heteroplastic formation whose anatomical and histological structure presents itself, under the microscope, as an extremely delicate reticulum, devoid of blood-vessels, holding in its centre, sometimes near the periphery, giant cells, epitheloid and other cells which bear a strong resemblance to white blood corpuscles, and dispersed between them a number of free nuclei—the whole encircled either by a zone of more compact fibres or passing already into the surrounding tissue. This stood as the classical structural type of tubercle—conceived as pathognomonic of tuberculosis. The tubercle being devoid of blood-vessels, is prone to necrobiosis—

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the giant cells being the first to become necrosed. This produces irritation, inflammation and likewise finally necrobiosis in the surrounding tissue. Like other heteroplasms, the tubercle can undergo either the fatty or the chalky, caseous or putrid metamorphosis. According to the teachings of Virchow, caseous pneumonia—consequently phthisis—is to be regarded as a morbid process different from tuberculosis. Partly in agreement with Virchow's teaching, partly in opposition to it, numberless experiments have been carried on, establishing beyond doubt the fact that morbid processes, identical with that of tuberculosis, can be incited by inflammation; and authorities are not wanting who regard all phthisis, consumption or tuberculosis as the result of an inflammatory process.

If the bacillus is the primary cause of tuberculosis, Virchow's fine distinctions, as well as the inflammatory theory, completely fall to the ground; and as Koch has found the bacillus in tubercles of the lungs, the brain, the intestines, the glands, in the fungoid affection of the joints, in caseous pneumonia, in all similar affections of the pig, the ape, also in bovine tuberculosis—all these morbid processes must be considered as identical.

Excepting, perhaps, the peripheric layers of muscles, the cartilages and the larger blood-vessels, tubercles have been found in every organ of the human body; and rather in the infantile body (from the age of two to five years) than in the adult. Further researches will have to show whether, in such cases, the bacillus is always present.

According to Koch, the bacillus seems to be a somewhat fastidious, aristocratic being: To grow and propagate he needs a temperature above 86° F.; between this and 104° F. he prospers.

Whilst other bacterias are not choice in the selection of their domiciles, are content with all sorts of places—generally dirty ones—the bacillus does not grow outside the bodies of warm-blooded animals; he selects herbivores and omnivores in preference to carnivores, and seems to have a predilection for the species homo sapiens. Even there he never nests on the surface of the body, neither in the skin, nor in abrasions

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or wounds. Thus there remain for the bacillus only two roads by which to effect a successful invasion; the organs of respiration or the organ of ingestion.

Invasion of the stomach depends on good chances; we may ingest infected food—milk from a tuberculous cow—drinks or food which have been standing for hours in an atmosphere laden with bacillic germs, or possibly we may directly swallow such infected air. Landed in the stomach, the progress of the bacillus may often be checked, and danger averted, by copious secretion of the gastric glands, which seems to be uncongenial to his nature. However this may be, it is a fact that invasion of the lungs is incomparably more frequent than that of the digestive or other organs, a fact which is corroborated by daily experience.

From the exhalations and secretions of the vast number of consumptive subjects in great cities, the air we breathe in crowded streets and close localities must necessarily be laden with bacilli and their germs. As respiration of the healthy, who mingle freely with the diseased, is going on incessantly, exposure to danger is nearly constant. We ought therefore wonder that consumption is not even more widely spread than it really is. That consumption is infectious is a matter admitting of no doubt; nevertheless we do not observe that persons in ordinary intercourse with a consumptive become infected, except by long-continued and intimate contact; nor is the infectiousness strikingly remarkable in families of which one member is attacked by consumption; nor do we see in hospitals, where patients with various diseases are crowded together, consumption transferred from one patient to another, or to the attending doctors or nurses—except under particular circumstances. Were this a matter of common occurrence it could not have escaped observation.

How is it that an infectious disease, which is so widely spread, is at the same time so little prone to infection? A satisfactory answer to this question has not, to my knowledge, been hitherto given. The bacillus may perhaps give it. We have said that the air passages constitute the normal road of invasion; yet at the very threshold of this road, in the nostrils, the invading bacilli and their germs are apt

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to be intercepted. To the well known fact that the air, in passing through the nasal cavity, is sifted of its harmful ingredients, the experiment of Dr. Schnetzler has given additional force. Dr. Schnetzler injected, by means of a glass syringe, distilled water into the nose, collecting the returning liquid in a watch glass covered by another—water, syringe and glasses having been previously completely sterilized and disinfected. The liquid so obtained showed, in every case, under the microscope, among various other particles, fragments of fungi, spores, infusoria, a quantity of micrococci, bacteria, bacilli and their germs. If the liquid was put in glass tubes hermetically sealed, and set aside in a warm place, in a few days the bacteria were found to have increased, and by adding a little nourishing liquid, could be successfully cultivated. If, as we know, bacteria will not increase and multiply in the nasal cavity, much less will the bacillus tuberculosis—which is more particular—do so. He will soon perish, and be blown or sneezed out.

New trains of invaders incessantly arrive, and some colony of bacilli may succeed in passing the nasal purgatory unhurt, and in penetrating into the trachea; or they may find their way directly through the mouth, and land in the lungs. If the host happens to be a healthy, robust individual, the bacilli have not yet found their heaven.

From the observations of Koch, we know that the bacillus is very fastidious in selecting his nesting place; that he grows very slowly, that it takes time before he becomes able to increase and multiply, and that in uncongenial surroundings whole colonies of bacilli die out. Meeting, in the healthy individual, with a clean, smooth, intact respiratory surface, the bacilli will not find in such lungs the necessary conditions for their progress and happiness; they will not settle down, but will soon be coughed up and flung out. Even if a colony should make a feeble attempt to settle, the danger is not so very great. Various issues have to be taken into consideration, of which we will speak presently.

On the other hand, matters present quite a different aspect if the bacillus makes its descent upon a lung in which the soil for his reception has been previously prepared. Stag-

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nation of the blood in the lung capillaries, hyperæmia of the alveoli, bronchioli and the larger air passages, abnormal secretion from the mucous membranes, are the local conditions favorable to the growth of the bacillus. Where an inflamed mucous membrane presents portions denuded of the epithelium, there the bacilli will effect a lodgment; there they will increase and multiply. The result of the ravages they make here is to be witnessed daily; and the sad picture of it is to be found in every hand-book of pathology. The spread of the bacillus in the lungs goes on partly by gradual extension of the tubercular zones over the surrounding tissue, partly through the lymphatic vessels, and often the invasion extends over the neighboring lymphatic glands.

The abnormal condition of health which is met with in many individuals of delicate, frail constitutions, long before physical signs of tuberculosis can be detected, has been a subject of various speculations and theories. The words "tuberculous diathesis" and "tuberculous dyscrasia" were oftener pronounced than understood, till recent experimental physiology threw more light on the matter.

In two previous papers I dwelt on the subject at some length, endeavoring to make clear how, either through an inherited abnormal constitution, or through bad sanitary condition (want of sunlight and air, insufficient nourishment, unhealthy habitations, exhaustion from suffering, physical and moral misery), a disposition is produced in which respiration is rendered shallower, and the thorax and lungs are but insufficiently expanded and inflated. It was farther shown how, through shallow breathing, the flow of venous blood is retarded, the action of the heart enfeebled, a stagnation in the lung capillaries produced, and how by these abnormal conditions a chronic state of hyperæmia, accompanied by elevation of temperature, is evolved, which renders the lung tissue vulnerable to injuries and prone to the development of phthisis. At that time I did not feel justified in speaking of the bacillus, and was compelled to use the vague expressions "vulnerable to injury and prone to the development of phthisis." To-day, without altering any of my previous statements for those vague terms, I will sub-

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stitute the more expressive one, "prepared for the invasion of the bacillus." Hence, we may boldly assert that the above described conditions correspond to all the requirements for the successful invasion of the bacillus, and that in the absence of those conditions the danger of invasion is not very great.

The amount and extent of harm from the invasion will depend, on the one hand, on the numbers and vitality of the invading bacilli. Mature, vigorous colonies soon spread; old, decrepid ones quickly die out. Very young ones will take a certain time before they are apt to do harm and multiply. On the other hand, it will depend on the intensity and extent of the anomalies brought about by the above named conditions. A long duration of such conditions, a succession of catarrhs extending over years, will produce morbid changes in the lungs, irritation of the neighboring lymphatic glands, and other injuries which favor the spread of the bacillus.

We frequently observe, in the course of phthisis, that the disease becomes seemingly arrested, and starts again after a while. It has likewise been observed that the bacilli, usually present in the sputa of every consumptive, sometimes disappear. We may then assume that the whole colony has perished, and anticipate a spontaneous recovery; or that only the elder members of the bacillus congregation have perished, and that the young brood has been carried away in the current of circulation. But if the bacillus re-appears after a while in the sputa, we must suppose that after the destruction of the colony the consumptive individual did not recruit sufficiently to enable him to resist a new invasion from outside. The time is not far off when we shall have to watch the sputa of the consumptive as diligently as we now watch the urine in diseases of the kidneys, diabetes, etc. The only opportunity given us for successful action is to seize the moment when the bacillus disappears, and guard our patient against a new invasion.

The following is the resumé of what we have hitherto said: According to the condition of the lungs and the vitality of the bacilli, the invading colony may settle down,

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increase and multiply, spread over the surrounding tissue, invade the neighboring lymphatic glands, reach the ductus thoracicus, and hence invade every organ of the body; or the whole colony may sooner or later perish, and the tubercular mass undergo the calcareous metamorphosis.

The frequent spontaneous cures of tuberculosis are a well known fact since the days of Rokitanski. Even as far back as 1836 Carswell, who was to the English-speaking world the pioneer of scientific conception of tuberculosis, said: "There exists no disease of whose curability pathological anatomy furnishes so many proofs as tuberculosis." Those proofs have recently been still more extended. Baumgarten, in his Anatomo pathological examinations, extending over many years, has found in all those dark-colored streaks, knots and nodules, located in otherwise perfectly healthy lungs (to which formerly little attention was paid, and which were designated as pigmentary indurations), unmistakable traces of healed tubercles. In them, and even in the minute chalky nodules, which one often meets dispersed in lungs, affected in no other way, he, after cautiously dissolving the lime in diluted acids, frequently succeeded in laying bare well preserved giant cells and other tubercular cells, whole or in fragments. The jocose dictum of the old professor, who used to console his over-anxious patients by saying, "Pshaw! everybody has a few tubercles," seems to turn out a truism.

Tuberculosis of the lungs, in many instances, passes as a mild local affection, and often heals spontaneously; or, in other words, the bacillus in invading sound lungs may create local disturbance, and soon perish. Or, as we have already mentioned, young bacilli, not far enough advanced to settle down, may be carried away in the stream of circulation, and either perish there or be landed in a neighboring organ; or passing this by, in a distant one, where, if the soil is favorable, they will settle down, grow, increase and multiply, and do a great deal of mischief, and may, even, from this new nesting place invade other organs. On the other hand, they may create some slight local disturbance, and perish after a while. Thus, we occasionally see children who have been

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afflicted with tubercular lymphatic glands—even with fungoid affections of the joints—after a long period of suffering, finally grow up into healthy individuals.

We have already stated that the bacillus sometimes finds his way into the stomach. Anatomo-pathological post-mortem examinations, however, seldom reveal tuberculous ulcers of the stomach. These are generally met with in the small intestines. From this fact we presume that the bacillus, after passing unhurt through the stomach, settles in the intestinal mucous membrane, sometimes effecting a lodgment on the surface, sometimes working his way to the serous membrane. By ulceration, the serous membrane may then become perforated. This calamity is, however, often averted by the formation of adherences to an adjacent tract of the intestines. From the intestines the invasion may extend to the mesenteric glands, and in some cases to the peritoneum. This leads to irritation and watery effusion into the peritoneal cavity, and to all the phenomena of fatal peritonitis. From the peritoneum the invasion does not usually spread to other organs. It takes the bacilli some time to grow, and before they can make new invasions, the patient succumbs. In nearly all autopsies of the tubercular peritonitis, tuberculous ulcers are found in the small intestines; nevertheless there are instances where tubercular peritonitis appears as partial manifestation of a general invasion. Other cases are recorded where tubercular peritonitis has existed a long time in a latent state, not giving rise to any marked symptoms, the irritation not being sufficiently potent to produce effusion. At the autopsy in such cases a number of the tubercular conglomerations appear, encircled by pigmentary deposits. To the anatamo-pathologist these zones of pigment give evidence that the invasion of the peritoneum is of old date; that tubercles have existed for a long time.

In accordance with the foregoing, we may "now more intelligently apply the term *latency*—latent tuberculosis"—to a certain class of disturbances. If I am right, we hitherto understood by "latent tuberculosis" a certain condition of disturbed health, which, notwithstanding the absence of all defined physical signs, aroused in the mind of the observer

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a suspicion of the existence of tuberculosis. To put some meaning into the term, we had to imagine an unknown poison hidden in the circulation.

With the new light before us, we must now eliminate from the meaning of "latency" that state of disturbed health designated as "constitutional tendency, phthisical habitus, paralytic thorax, accompanied by shallow respiration, quick and feeble pulse," etc. This abnormal state furnishes no evidence that an invasion of the bacillus has taken place; it only reveals a condition favorable to a successful invasion. Consequently the term "latent tuberculosis" must only be used to designate the lapse of time intervening between the invasion and the first manifestation of the disease, or the condition of the body after the invasion of an organ, only giving rise to local symptoms. This might simply be called local tuberculosis, were it not that we mean to point, by the term "latent," to the possibility that, from that affected organ, a general invasion may emanate.

We will now close these "speculations," and approach the interesting question, *What can we do with the bacillus?* Pills and mixtures may serve some end, but hardly the one in view. Nobody will venture to find any internal medicine, as yet administered, guilty of the death of a single bacillus. Nor do we fare better with the more rational treatment—antiseptic inhalations. Of all the antiseptics we know, there is not one which does not rather hurt the lungs than the bacillus. How resistant is his hard shell-like coat, Professor Ehrlich in Vienna has shown: Treating a speck of diseased lung tissue with fuming nitric acid, diluted with two parts of water, every kind of matter in the preparation was whitened and scorched except the bacilli, whose vitality remained unimpaired.

No doubt there are substances which have a toxic effect on the bacillus, but none of them can be introduced, in killing strength, into the living body. Dr. Koch has made a series of experiments with various reputed disinfectants, with a view to ascertain their real value. From it we learn that carbolic acid in the customary watery solution may annoy the bacillus and retard its development, but has

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no effect on its vitality. Foremost in value stands freshly prepared chlorine water; it kills the bacillus and its germs outright. So also do sulphurous acid and bichloride of mercury, in a one-per-cent. watery solution. Vallin, in Paris, has obtained the same results in another way. He saturated a sheet of filtering paper with a filtered infusion of tubercular matter, and allowed the paper to dry. It was then cut into small strips of equal size, each of which yielded an equal dose for one inoculation. One portion of the strips was used to inocculate animals, and produced tubercles in every instance. The other portion of the strips was exposed to the action of various disinfectants. In a small chamber of a capacity of fifty cubic metres, strips were exposed to the fumes of sulphur for twenty-four hours. It was found that twenty grammes of sulphur had to be burnt in that space to render the virus innocuous. Inocculation with the virus of the strips so treated never produced an effect; if less than twenty grammes of sulphur were burnt, the strips still retained their virulence. Watery solution of bichloride of mercury rendered the virus equally inert; and Vallin maintains that a solution as weak as one to a thousand of water destroyed the virulence. Unfortunately, we cannot burn sulphur inside the lungs, or introdnce sulphurous acid into the air passages in the required proportion; nor can we administer to the bacillus in the lungs a bath of a solution of corrosive sublimate.

If we have no means at our command to destroy the bacillus inside the living organism, we may still conceive the possibility of retarding or checking his progress. In antiseptic surgery there are no germicides in action; no killing of bacterias is going on. By certain methods of antiseptic dressing the wound is kept guarded against the approach of bacterias and their germs floating in the air. Precisely in a similar manner may we surround the patient with an atmosphere repulsive to the bacillus. This might act in two ways: 1st. It may counteract a succession of invasions. As it is not quite certain that the progress of the disease is entirely due to the propagation of the bacillic settlements already established in the lungs and not also, in equal measure, to a suc-

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cession of new invasions from outside, such repeated invasions may be averted and the old colony die out, resulting in a spontaneous cure of which we have so many examples. 2nd. By the continuous action of an atmosphere inhaled into the lungs, which is uncongenial to the bacillus, his vitality may be gradually impaired, and he may eventually perish. This would indeed be a scientific cure. It is apparent that taking an occasional whiff from the atomizer is somewhat like performing a ritual ceremony. No effect can be looked for if the inhalation of such air is not continuous. How this can be accomplished, I am not prepared to say. None of the devices hitherto suggested appear satisfactory.

Nevertheless, there are instances when the accidental but constant admixture of certain antiseptic substances to the breathing air seems to have produced immunity. In this connection I will mention a letter which has recently come under my notice. It is written by Mr. Kirchner, proprietor of a chemical factory in Brooklyn, N. Y., to a Vienna periodical and reprinted in the *New York Medical and Surgical Reporter*. Mr. Kirchner writes: "The observation of Koch has found a brilliant confirmation in my factory, where a large quantity of sulphur is evaporated daily. That, in this process, a great deal of sulphurous acid is formed, can easily be imagined. During the forty-four years that my factory has existed, none of the many laborers have ever been affected by tuberculous consumption, and frequently persons in the first stages of this disease applied for admittance and were cured within a few weeks."

Similar effects are alleged from certain volcanic regions, where through eruptions from the volcanoes, or from deposits of sulphur on the surface of the earth, a certain quantity of sulphurous fumes constantly mingle with the air. I do not advance this as a proof, but only as a fact deserving attention. No doubt an approaching crowd of bacillic invaders will turn away with disgust from the atmosphere of such a factory. As for the "cure of the first stage of tubercular consumption" alluded to—if it really was consumption—it can only mean that by happy chances and under the constant influence of an uncongenial medium, the bacillus perished—

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new invasions being kept off by the atmosphere of the factory.

Can we, in a general way, put the consumptive in similar conditions—confine him for a great part of the time in an apartment where sulphur is burning? After all, similar effects, in a great number of cases are produced by the pure, cool, mountain air; and besides the aseptic effects of such air, we have also its physiological action, which deepens the respiration and invigorates the action of the heart (as is more fully explained in my paper on "*Air*"—*Virginia Medical Monthly*, February, 1883.

Like a luminous image, the possibility dawns before our eyes of entirely eradicating this terrible scourge, by gathering from the cities all the consumptives and scattering them on the altitudes all over the civilized world. If this be possible, it is not practicable; it is as much possible and as little practicable as to make our great cities, as now built, healthy abodes for human beings; and hence each one of us has to do, in his limited circle, the best he can. If the choice were given me between sulphur and mercury on one side, and mountain air on the other, I should always select the latter.

If we conscientiously, though privately and in a low voice, have to admit that in any case of cured consumption we have played only the part of a witness and can play no other part, we are, on the other hand, in a position to accomplish a great deal in regard to prophylaxis. Not only are we enabled to prevent, in a certain measure, the spread of the disease, but we are bound in duty to use the means at our command.

The danger of infection for the healthy and robust not being great, we have to concentrate our care and endeavors on the individuals with so-called constitutional tendency, with paralytic thorax, shallow respiration and feeble action of the heart; on individuals with scrofulous symptoms, with chronic catarrhs of the air-passages; on individuals who are in a state of exhaustion and debility from overwork, from bad nourishment or bad habitations, or who have just passed through a severe fit of illness, and especially on children with frail, delicate constitutions. In all such inividuals the

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soil is more or less prepared for the reception of the bacillus —they will be infected whenever exposed to infection. Our task will be to guard them, by all possible means, against an invasion, and whilst we are so guarding them, to improve, at the same time, their bodily condition, so as to enable them better to resist present and future invasions.

Mountain air is the air to be preferred for them; if the mountain is beyond reach, let them take to the valley—if they only be in the *open air*. If they are tied to the city, they should select a dwelling accessible on all sides to sun and air; rather live in the most unsightly old house, in a hut or a tent, than in the modern built contracted tenement into which but the scantiest supply of air and sunlight is admitted, and where bacteria and bacilli, when once in, never find their way out. They should avoid as much as possible sedentary occupation in confined spaces. Such children should have more play than school-hours—more muscular than mental exercise. They should be prevented from frequenting crowded places, where the air is always contaminated. They should not live in close contact with the consumptive, and never sleep in the same room with him · it will also be advisable for them to avoid taking their meals with him; floating bacilli and germs are apt to alight on the dishes, and so gain access to the digestive organs.

The sputa of the consumptive should often be removed, burnt or otherwise destroyed. It is infectious in the highest degree, even in the dried condition in which it floats in the air in the form of dust. In tuberculous affections of the intestines, the bacillus is present in the excrements; such patients ought to have their separate closet. All wearing apparel, bedding, etc., used by the consumptive must be submitted to thorough purification or disinfection before it can be again used. Articles which can only be cleansed with difficulty and expense—for example, carpets, curtains, etc.—had better be entirely excluded from the consumptive's room.

Such precautionary measures, dictated by popular fear, are common in Southern Europe, chiefly in Italy; not as an outcome of science, but as a piece of traditional wisdom. Such popular notions about health and disease, sometimes

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wise, sometimes foolish, are various in different countries. Amongst us popular traditional wisdom has plenty to say about "biliousness" and "deranged livers," but is entirely silent on the infectious nature of consumption; not the slightest regard is paid to precautions against the dangers of contamination. It will be our duty to arouse a wholesome terror in the public mind in regard to this point.

ADDENDUM.—After sending the above to press, I learned from a newspaper paragraph that Dr. Arnold Spina had found company, and, moreover, good company. Dr. Klebs, one of our best authorities in the science of medicine, has forwarded to the *Vienna Medical Gazette* a communication in regard to the bacillus, in which he contests the value of Koch's discovery. The result of his researches is like that of Dr. Spina's. He asserts that we have no means to distinguish the "bacillus tuberculosis," if he exist, from other bacteriæ. In the morbid products of tuberculosis there are, besides bacteria, masses of micrococci in the form of granules, which, according to Klebs, are better entitled than the bacillus to be considered as the cause of tuberculosis. Klebs promises a pamphlet on the subject.

I will mention here, that, in 1878, Klebs thought he had discovered the syphilitic contagium in the form of certain micro-organisms which he designated as "helico-monads." He cultivated them and made some successful inoculations; but as nobody could succeed in distinguishing those organisms from other bacterias, the subject was dropped.

It is the great merit of Koch, that he has devised the means to differentiate the bacillus from other bacterias; but it is the evincive power of those means which is now contested; and Klebs, before admitting the bacillus to be the cause of tuberculosis, requires the demonstration that the tubercular product from which the bacilli have been separated by filtration, shall prove inert.

Buhl was the first (1877) to detect bacterias in tuberculous matter; he ascribes to them only the role which insects play in the dissemination of flower-pollen. Even if we have to restrict the action of the bacillus in this manner, he still retains his important part in the propagation of tuberculosis.

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Having neither the means, nor the time to verify Koch's discovery, we accepted the proofs as furnished by such men as Koch, Ehrlich, Gibbes, etc.—ready, as we said in the above article, to drop any belief or theory the moment we become better informed.

ART. IV.—**Puerperal Eclampsia.** By THOMAS J. MOORE, M. D., Formerly Vice-President Medical Society of State of North Carolina; Vice-President Richmond Academy of Medicine, etc., Richmond, Va.

[CONTINUED FROM MAY NO., 1883,—PAGE 90.]

Prognosis in puerperal convulsions is subjected to many qualifying conditions. I will not attempt to give more than a few of these, as this paper has already become longer than I expected. The three states—gestation, parturition, and the lying-in—all have a direct bearing upon prognosis. As a rule, the two latter conditions are more favorable than the first, and the last more so than either of the others. The calculations in regard to mortality are not made upon the same basis; therefore it is impossible to obtain uniformity. Cazeaux gives the rate of fatality of all persons affected with eclampsia as one out of every four or five; Madame La Chapelle says one-half die; Braun, thirty per cent. Professor Barker divides his cases into two classes—before and during labor, and after parturition. Of the former, thirty-two per cent. are lost; of the latter, twenty-two. He states, however, that this estimate is too high; for he feels convinced that improved treatment, especially the induction of premature labor, has reduced the mortality one-half. Professor Barker has since published a statement in which he claims that his rate of mortality has been reduced to fourteen out of every hundred. The conditions incident to gestation necessarily render this period the most dangerous. Where the convulsions come on early, are repeated with frequency, especially if albumen has been found for some time prior to the convulsions (as this generally indicates an altered state of the blood and kidneys), there is danger here to both mother and child,—to the mother for the reasons that the attacks are liable to frequent repetitions; and the condition

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of the neck of the uterus, being long and rigid, renders premature labor difficult and dangerous—sometimes impossible. Primipary also adds much to the danger.

Children, previous to the seventh month, are all lost; and from the seventh to the middle of the eighth, the great majority perish. The induction of premature labor, which is often considered indispensable for the preservation of the mother, adds greatly to the rate of mortality of the children.

When the convulsions come on during labor, much depends upon the stage at which they make their appearance, the condition of the neck and os of the uterus; position of the child, normality of the pelvis—everything retarding rapid and easy delivery, will prolong and intensify the convulsions; and all manual interference, such as forcible dilatation of the neck, version, or application of the forceps, will add to the danger of mother and child. Of course, where the convulsions appear late in the labor, where the neck is dilated or dilatable, and all other things are normal, we may expect much more favorable results than where labor takes place earlier, and where the neck is not yet prepared to undergo rapid dilatation. The quicker and easier the child is delivered, the more favorable will be the prognosis to the mother as well as the child. Speedy delivery is now regarded as one of the most important factors in the treatment.

The character, duration and repetition of the convulsions are also to be considered in arriving at a proper prognosis. Where they are few in number, short in duration, with wide and lucid intervals, the prognosis is favorable. A large number of convulsions, with continuous and increasing coma, is to be looked upon with much apprehension.

The presence of albuminuria as a symptom becomes grave in any of the stages, just in proportion to its quantity, its first appearance, and its duration. Where albumen appears as but a trace, of course the patient's condition is to be looked upon as much more favorable than where nearly all the contents of a test-tube solidify under heat and nitric acid. Again, a knowledge of the quantity of urine discharged during the twenty-four hours is important in determining the amount of albumen lost in a day. A high per cent. of albumen and

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small quantity of urine sometimes is not so serious as a low per cent. and large quantity of urine. I do not refer to those cases where there is virtually a suppression of urine, there being possibly not more than two to four ounces passed in twenty-four hours; but I speak of those conditions where the urine keeps, in a restricted sense, within physiological bounds.

Œdema is a symptom grave in proportion to its extent, general anasarca being more serious than simple œdema of the face. This condition indicates either impoverished blood or disease of the kidney—generally both: the condition of the kidneys producing it being usually venous congestion. Œdema, associated with albumen and casts, makes the prognosis more grave as to the probabilities of developing eclampsia; but statistics do not prove that when the explosion takes place, the attacks are more fatal.

The position has been taken by some of our best observers that this œdema is an element of safety to those threatened with eclampsia; and that the tissues and cavities occupied by the outpouring serum of the blood act as reservoirs, for the time being, of this element which contains the morbific ingredients that give rise to nervous excitation. Clinical experience proves, however, that instead of correcting the chloro-anæmia, it has a tendency to still further impoverish the blood, and intensify the pre-existing disposition to anasarca.

Convulsions appearing in persons of nervous temperament, in the hysterical, and in those who are suffering from great excitement or depression, are not to be regarded so serious as those occurring in the phlegmatic. Where the convulsions can only be accounted for as arising from the condition where chloro-anæmia exists, and albumen is found in the urine, they are to be more feared than those which arise from reflex excitability produced by irritation of some one of the organs, as the uterus, bladder, intestines, etc.

The *convulsions which appear after labor* are evidently less fatal than those occurring in the stages of gestation and parturition. As before stated, Professor Barker gives the rate proportion to the whole number who die in eclampsia as

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twenty-two per cent. Far different is it when the convulsions which make their appearance during parturition are carried over to the lying-in state. Cazeaux and Ramsbotham describe this class of convulsions as the most fatal of all. After delivery, albumen usually disappears in from four to five days; so with casts; and the kidneys rapidly resume their proper functions, being restored to their normal anatomical condition. This is the rule. Of course there are exceptions. Where albumen persists for ten days or two weeks, we may fear that Bright's disease is being developed, or its appearance in the urine may be a premonition of a return of eclampsia.

In a woman who has had convulsions, either during or prior to delivery, we sometimes have profuse post-partum hemorrhage, owing to the impoverished condition of the blood, or from the failure of the uterus to contaact, on account of its exhaustion. Rupture of the uterus, caused by too violent and rapid contraction, mal-position of the fœtus, or from improper manipulations generally, proves fatal to the mother.

Sequelæ.—Delivery is occasionally followed by *mania*, which is usually transient, the patient recovering her faculties within a few days. *Amaurosis* occurring during gestation or parturition, whether accompanied with convulsions or not, produces different degrees of imperfect vision, sometimes total blindness for the time being; this is thought to be attributable to fatty degeneration of the retina. The majority of persons thus affected recover after a period more or less remote; even those cases where total loss of sight accompanied the affection, usually get well in the end. So also some of the worst types of hemiplegia recover. A unique case of aphonia, which proved to be permanent, is related by Prof. Barker. *Amnesia* is also said to be one of the resultants of eclampsia.

The *dangers to the fœtus* are necessarily greater than those to the mother. Of course all children born prior to the seventh month are lost, as before that time the infant is not capable of a separate existence. I am aware that there are a few exceptional cases cited to prove that the child is viable

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prior to the 28th week or 196th day; but I have always believed that the time actually reached was almost identical with this period, or, what is more probable, that there had been some misconception in regard to the exact time of conception—the cited cases almost always occurring in primipara after marriage. The French being a people remarkable for adaptability when the occasion demands, have made the time as short as 180 days—the shortest time that the vaguest cited case would sustain. Where the convulsions appear early and are often repeated, an abortion or miscarriage is liable to take place. Evacuation of the uterus is now generally recognized as necessary; so it is not putting it too strong when we state that under these circumstances the great majority of the children are lost.

We may have convulsions, however, that occur early and are repeated during gestation without proving very serious to either the mother or child, but this is exceptional. During parturition there are many accidents which may occur endangering the life of the child. Partial or complete separation of the placenta, from uterine contraction in sympathy with the convulsions, pressure upon the cord, cutting off the fœtal circulation, malpositions of the fœtus, unusual rigidity of the uterine neck, an undilated or undilatable os, early escape of the liquor amnii with tetanic condition of the uterus, all are productive of this result. Manual interference with the forceps or by version may prove so injurious to the child as to compromise its life. Another cause will be found in fatty degeneration of the placenta, from defective nutrition owing to impoverished condition of the blood in the chloro-anæmic.

Cazeaux, Prestat and Schmitt assert that the blood of the fœtus is not only affected by the condition of the blood of the mother; but their argument goes to show that, chemically, the child's blood becomes identical with that of the mother, producing like results. A case is cited by Cazeaux where a child, which was living a few moments before, was extracted by forceps from a mother in convulsions; the child was dead, but the muscles of the extremities were in a tetanic condition.

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The statistics given by Braun, of Vienna, in his work on *Midwifery*, show that the mortality of children is sixty-five per cent. in premature deliveries; forty-five per cent. during parturition at term, and forty per cent. immediately after labor. In cases complicated with convulsions, it is certainly not an extravagant estimate; in the two first conditions, judging from the afore-mentioned accidents to which the child is subjected, it seems to me that his estimate is rather below than above the mortality incident to that class of labors. Where the fœtus has been affected by the blood of the mother, although the child may be safely delivered, it is liable at any time during the early stage of its existence to develop convulsions.

The ability to arrive at proper conclusions concerning the prognosis in eclampsia is difficult in the extreme; each case is almost a law unto itself. And while I trust that you may be able to practically apply rules governing the prognosis in eclampsia, complicated or uncomplicated, I desire to make this further statement:—There is no case, however light, which should not awaken sufficient apprehension to arouse you to immediate and vigorous application of such remedies as are indispensable to the welfare and safety of your patient; on the other hand, there is no case so grave (it matters not how serious the symptoms may be) that should cause you to despair; fight for the existence of your patient so long as a spark of life is left.

Treatment.—Were I to attempt to give the treatment of eclampsia as described in the works of the various foreign and American authors, my paper would grow out of all proportion to what is intended upon this occasion. To Braun, Cazeaux and Prof. Barker are we especially indebted for the full and learned manner in which they have dwelt upon this portion of the subject. While the two former writers brought prominently to the attention of the profession the use of blood-letting, chloroform and opium, with their views as to how and when they should be administered, it remained for Prof. Barker, in his work, to place in their proper relations these remedies to the indications as they might arise, and to modify and change their relations to the various stages of

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this disease. To Prof. Barker and to Braun are we particularly laid under obligations in regard to the manner and time of inducing premature labor and the management of the woman during and after parturition.

I cannot draw largely from my own experience in the treatmhnt of this disease, for, as you are well aware, no physician, unless he lives in a dense population, is a specialist in midwifery, and enjoys a large consultation practice can have such a range of experience as to make his views especially valuable upon this subject.

From 1855 to 1874, Prof. Barker had but eight cases in private practice and sixty-four consultations; he had for this same period been a physician of the obstetrical department of Bellevue Hospital. From October, 1868, to April, 1870, it was my fortune to serve as one of the physicians in that institution, and while there, more than one thousand children were born. In all unusual cases, the resident staff were called together. In this way, I saw several cases of eclampsia, and either treated them myself or observed their treatment under others. This experience, with my observation in private practice, is the basis upon which the following exposition of treatment is founded.

The treatment of puerperal eclampsia is necessarily divided into the preventive and curative.

Under the *preventive*, we have to treat all those conditions heretofore described as peculiar to albuminuria or uræmia. Upon finding albumen in the urine of a pregnant woman, especially if it is persistent and in any quantity, we have every reason to suspect chloro-anæmia; unless there are unmistakable evidences of plethora, a resort should at once be had to the use of ferruginous tonics, hoping by such means to increase the blood globules, and reduce the serous condition of the blood. Various preparations of iron have been recommended—the lactate, carbonate, tinctura ferri chloridi and ferri sulphatis redactum—the latter as one of the elements of Bland's pills I prefer, and believe it better adapted to this condition than any other ferruginous preparation. The tinctura ferri chloridi in combination with chlorate of potash is highly recommended. In addition to this treat-

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ment, the hygiene of the woman should be carefully looked into. She should be required to take out-door exercise, to be properly clothed, to take a warm bath daily; the secretive functions of the skin and kidneys must be especially looked after; the sleeping apartment should be ample in size, well ventilated, but free from draughts of air; above all, avoidance of excess in the way of social or table indulgence should be enjoined, and the patient should be prevented from becoming constipated.

Should there be œdema accompanying this condition, and hyperæmia of the kidneys, one or both, it will be well to administer hydragogue cathartics twice or thrice a week, which, by their exosmotic action, will reduce the serum of the blood; if there is decided hyperæmia of the kidneys, coupled with a diminution of their secretion, use in conjunction with these cathartics, or when catharsis has been carried far enough, the milder diuretics, such as the acetate, citrate and bi-tartrate of potash combined with digitalis; the bi-tartrate in an infusion of digitalis is especially valuable. Diuretics serve to flush the kidneys, as it were, driving the casts out of the Malpighian bodies and tubes; however, they must not be continued for too great length of time, but should be temporarily left off to be resumed, if necessary. In the interim, pure distilled water and some of the natural, such as Buffalo Lithia and artificial mineral waters, are useful. The milk diet, as suggested by Professor Bartholow in Bright's disease, occurs to me might prove useful when we wish to stimulate the kidneys and at the same time give nutritious food; milk is a fine diuretic when taken in quantity. Cupping over the kidneys, either dry or wet, is valuable to relieve pain or promote secretion. Should there be no improvement in the patient, but, on the contrary, if chloro-anæmia continues to develop, as manifested by an aggravation of all the symptoms, especially an increase of headache, vertigo, difficulty in breathing, a labored pulse, suffusion of the skin and injection of the conjunctivæ, it is better to bleed the patient from the arm, taking from twelve to eighteen ounces, according to requirements, and repeating the same if necessary; then resume your former treatment of iron, etc.

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When the patient is plethoric, to bleed early, freely and sufficiently often is indispensable, following the venesection by cathartics and diuretics. These measures being resorted to in time, the patient carefully looked after, and the remedies judiciously applied, the majority of cases of albuminuria will be tided over parturition at term without convulsions, with attendant recovery. On the other hand, however, should the above-mentioned measures appear inadequate to bring about the desired result, and there are evident signs of the patient growing worse, especially when two or more attacks of convulsions have occurred, there is but one course left—production of premature labor.

In regard to the use of blood-letting in gestation, parturition and the lying-in, it becomes necessary to make some observations concerning its therapeutical value. I will not go over the often canvassed ground of blood-letting in general; but in the plethoric, sero-plethoric and convulsed condition of puerperal women, it becomes necessary to meet certain congestive conditions, which blood-letting alone will reach. The great tendency in pregnant women where we have plethora of either kind is toward congestion of the spinal column, of the brain, kidneys and lungs, with their attendant resultants, as previously described. To relieve any one or all of these conditions, blood-letting becomes not only the most important but is the only remedy that will reach all of the indications. The amount of blood to be extracted depends upon the condition of each patient. In the stage of gestation, much depends upon whether we have the true or serous plethora to contend with. What we desire is to reduce the general volume of the blood to the extent of relieving tension of the blood vessels, thus preventing a congestive condition taking place in the organs above described. When this is attained, we have reached, for the time being, the desired end. This will be evinced by an amelioration of the symptoms of the patient; the pulse from being too full and tense, will become soft and reduced in frequency; the face will lose its peculiar expression, headache, tinnitus aurium, vertigo and dimness of vision will either disappear or be greatly relieved; dyspnœa, if existing, will generally dis-

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appear; but above all, hypostasis of the kidney will be temporarily relieved, and we will have an increase in the quantity of urine, and diminution of the albumen; the latter may often entirely disappear. Where the pulse does not decrease and the symptoms become greatly alleviated, unless the patient is very anæmic, one or more bleedings may be necessary, according to the stage in which the patient is when the remedy is resorted to. Thus, in gestation, after the bleeding, followed by cathartics and diuretics, there may be for some time an amelioration of the symptoms, with a gradual return to the former condition, when a second phlebotomy may become necessary. This again may be followed by the same result as before, when a third bleeding may be found indispensable.

During a convulsion, or immediately preceding an attack, it may become necessary to bleed more than once in a short space of time—in from one to two hours. More than two bleedings are rarely needed; in fact it is not safe, as a rule, to go beyond this second extraction of blood. To push this measure beyond a certain point is dangerous in the extreme. Exsanguious people die in convulsions. In all cerebral conditions, where a serous effusion upon the surface of the brain, or into the ventricles, is threatened, or a rupture of a cerebral blood-vessel is feared, bleeding is our only safeguard. Another advantage in blood-letting is that much of the morbific element in the blood is withdrawn, rendering the cerebro-spinal system less susceptible to reflex impressions. The use of cups—both dry and wet,—also leeches, are important adjuvants to phlebotomy, especially in the anæmic where a second phlebotomy is contra-indicated.

During the eclamptic state, it is better to rely upon wet cups than leeches, as the latter are with difficulty retained upon the cephalic region. When used, they should be applied behind the ears. Sinapisms to the back of the neck, upon the thighs, calves of the legs, and on the wrists and ankles, have been recommended; but they are generally too feeble in action to meet the desired end. A blister sometimes proves most efficient in the comatose state, placed upon the back of the neck immediately below the occiput.

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Dry cups answer a good purpose used upon the nape of the neck and on the thighs and chest. Where blood-letting is contra-indicated, certain mechanical derivatives prove useful, especially the boots of Junod and the ligation of the thighs, as recommended by Vogel. In either of these ways, a large portion of the blood of the system is temporarily withdrawn from the general circulation, which enables one to gain time for applying other more permanent remedies. The compression of both common carotids has been used with more or less success. Application of cold to the head by means of an ice-cap, or compresses wrung out of ice-cold water, are valuable in all stages of convulsions, more especially in febrile coma, and in the various phases of delirium.

Bromide of potassium and hydrate of chloral, for their sedative and soporific effect, either singly or combined, will often prove of advantage during gestation where the patient is nervous and restless, particularly for the purpose of producing sleep at night. These remedies are unavailing to ward off an attack of impending convulsions, or to produce sedation during the intervals, where there is a strong disposition upon the part of the convulsionss, to repeat themselves.

Veratrum viride is a popular remedy in the Southern and Western States, used with the hope that its recognized power of reducing vascular tension, and its asserted one of quieting spinal irritation, would meet the required indications. It has been fully and freely tried by the profession at large, only to be laid aside.

Pilocarpine, from its known power of bringing about profuse diophoresis and salivation, has of late been highly recommended by physicians, both in Europe and America. Braun (*Klin.*, June 16th, 1879) strongly urged its claims. Professor Barker (*Med. Record*, March 1st, 1879) as strongly condemns its use. Owing to the marked and uncontrollable exhaustion which this drug may produce when given in full and efficient doses, renders it dangerous in the extreme.

Nitrite of amyl by inhalation is recommended by Professor Roberts Bartholow in cases where we have great vas-

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cular tension. I refer to it in consequence of the distinguished source from which it comes. Of the drug, I cannot speak, as I have never applied it.

After blood-letting, the remedy next in importance to control convulsions, as well as to ward them off when imminent, is chloroform. Cazeaux, Braun, Professor Barker, all highly recommended it as invaluable for this purpose. Objections have been raised to this drug by a number of authors, who allege that it has a tendency to produce cerebral congestion. Dr. Waring, in his *Therapeutics*, when speaking of the post-mortem appearances from chloroform, asserts that it does not produce such congestion. Chloroform is highly sedative in its character, overcomes, for the time being, reflex irritation, produces pleasant sleep, and is especially useful from its power to create general muscular relaxation; it relieves the spasm of the platisma myoides and muscles controlling the glottis, and in this way *wards* off the tendency to cerebral congestion, and prevents impediment of circulation in the lungs. In its administration, we should endeavor to anticipate the attack by observing the behavior of the patient. So soon as the customary premonitory symptoms commence to show themselves, administer by inhalation the remedy at once. During the convulsion, should you fail in preventing it, stop administration of the drug, and discontinue until respiration and circulation cease to be seriously embarrassed. Where the intervals between the attacks are short, it must be renewed and continued through the comatose state. The length of time between the attacks will indicate the extent to which the drug is to be pushed. Where the convulsions appear after long intermissions, and are marked by a measure of regularity, as is quite often the case, chloroform is to be left off during the greater portion of the interim, and renewed when the premonitory symptoms of a convulsion manifest themselves. Where the convulsions appear in rapid succession, it is often necessary to profoundly narcotize the patient for *hours*. Chloroform is used in the three stages of gestation, labor, and after parturition, whenever convulsions are developed; but in post-partum eclampsia it must be used guardedly, and can often be dispensed with.

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Opium, in some of its forms—preferably that by the hypodermic method,—stands next to chloroform in value. Clinical statistics have successfully refuted all arguments which have been advanced against its use. Professors Barker, Metcalf, and others of the United States; Keswisch, Scanzoni, Kilian, Wieger, Hol, Feist, Credé, etc., of Europe, have recommended its use in one or more stages of the attacks. Professor Loomis resorts to it to control uræmic convulsions occurring in other than puerperal women. Its great value consists in its power of holding in subjection nerve irritation; it adds much to tne efficacy of chloroform, requiring less to be administered, and producing more permanent effects. It is recommended to be generally used prior to the administration of chloroform by both Bartholow and Esmarch. It exercises its influence for several hours; is to be used in large doses—from one-third to half a grain of morphine hypodermically,—and repeated if necessary within two hours. The very large doses of grains one and a half within two hours when required, as urged by Dr. Clark, of Oswego, N. Y., and others who have accepted his views,—seem to me hazardous in the extreme. Certainly further clinical experience is necessary before it can be judicious accepted by the profession.

Opium can be used with propriety in all the stages of excitement in the eclamptic, except during the act of parturition, when it is to be wholly suspended, and chloroform alone used; for the former drug has a tendency to suspend uterine contraction.

When called to a patient with convulsions, see that she is put to bed carefully, or if she has already been placed in bed, see that she is lying in a comfortable position, remove all unnecessary clothing. If in the convulsive act wait until the paroxysm is over; in the meantime see that her garments in no way constrict her; do not permit the patient to be held, but allow her limbs free movement, only restraining when necessary to keep her from falling off the bed. Return the tongue in the mouth and resort to such measures as will prevent it from being bruised or bitten. See that the room is well ventilated without the creation of draughts, and be sure

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that your demeanor is calm and self-possessed. Absolute quiet is essential to your patient. When the attack occurs before labor, if the indications will at all permit, bleed and bleed promptly, repeating the bleeding if necessary; then, if the patient is conscious, give a brisk cathartic; calomel and jalap, as recommended by Prof. Barker, is a most efficient remedy. Should the patient be comatose, administer elaterium in butter, placing it when you can upon the back of the tongue; but if unable to do this, place it between the cheek and gums and it will soon be appropriated. When the elaterium is fresh, use one fourth of a grain every fifteen minutes until catharsis is brought about. In this way you will produce several large watery evacuations. This drug I have always used and never found it to fail me but once when I concluded that age had made it inert. After the blood-letting, commence the use of chloroform so soon as there are evidences of an approaching convulsion, and continue it in the manner previously described. When you have the patient under the influence of this drug, examine the bladder and draw off the urine if necessary; this should never be neglected, as the retention of urine sometimes proves a source of great irritation and annoyance, and it is believed that it occasionally keeps up the convulsions. During parturition, it will retard labor, and sometimes the bladder either bursts or becomes seriously injured from mechanical pressure. Morphine hypodermically should follow or accompany the use of chloroform; it prolongs the chloroform impression, and in itself possesses the power of keeping in subjection for some length of time spinal irritation. This remedy is to be repeated at intervals as the occasion demands. It is best given in large doses, from one third to one half grain at a time, repeated promptly if it falls short of the desired effect; as much as two grains can be used within a few hours in severe cases. This is the extreme limit to which I would dare carry it.

Coma is the usual manner of dying in convulsions. Prior to term or rather at any time previous to the eighth and a half month, if the symptoms of labor manifest themselves, do nothing to retard it; on the contrary, the physician is to

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be congratulated upon so fortuitous a circumstance Where convulsions continue despite all our efforts and the patient bears evidence of growing rapidly worse, having passed into coma, it becomes a question as to the propriety of producing labor. The rule governing us in this condition as well as at term is uniform: whenever the emptying of the uterus can be accomplished with anything like promptness and without producing great reflex irritation or exhaustion upon the part of the woman, it should be done. Use chloroform without opium during the expulsive stage. Prior to the eighth and a half month, the uterine neck has virtually retained its length and the os internum its constriction—they both being in a more or less rigid condition. The induction of premature labor is thus rendered difficult and tedious, but often becomes necessary; the safest, quickest, and least harmful manner of producing it, remains to this day an open question. The use of the catheter between the chorion and the walls of the uterus, the caoutchouc bag or colpeurynter, warm vaginal injections, smearing the neck of the uterus with extract of belladonna, introduction of the sponge tent with sufficient tamponing to retain it, the tampon proper, incising the neck, (can only be used after eight and a half months) and the forcible introduction of the hand have all been recommended. The mechanical means suggested stand in the order of efficiency as I have arranged them; often the first two measures combined will prove of the greatest service. To incise the neck prior to the dilatation of the os internum would be as useless as dangerous; and as to forcing the hand into the uterus for any purpose it is not to be thought of. Why resort to a measure so harsh when we have all of these conservative means at our command? Wait until the neck is dilated and then if contractions do not come on with sufficient force to expel the child, or labor is retarded from any cause not requiring destruction of the fœtus, and the head is engaged in the superior strait or lies anywhere within the excavation, apply the forceps and with steady, gentle traction, deliver. When necessary, resort to podalic version, but never when the application of the forceps is practicable.

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Convulsions occurring during labor are to be treated, so far as the use of blood letting and chloroform are concerned, in the same manner as those occurring during gestation; opium is, however, not to be given. Observe all the customary rules laid down for the guidance of the obstetrician in uncomplicated labor: be sure and test with the catheter the condition of the patient's bladder. Should the patient suffer from suspended digestion and the contents of her stomach prove annoying, relieve her by some of the mild emetics (not often required); where there is constipation, give a saline purge or open the bowels by means of an injection, provided the patient is comatose. Where patients retain their consciousness in the intervals of attacks, the reflex impression produced by an injection has been known to bring on a convulsion. Promote natural labor in every way; should there be unusual distention of the uterus and the os is dilatable, rupture the membranes and allow the liquor amnii to flow off: should the neck be dilatable and soft, but not dilating, manipulation with a finger will sometimes hasten delivery. If everything is going on well, the attacks occurring infrequently, do not mechanically interfere with the labor; but if the parturient act is proving unusually annoying to the patient, and she is growing restless and exhausted, or has passed into coma, deliver as soon as permissible with forceps or by version—the former always to be preferred when practicable. Keep the patient under the influence of chloroform during the expulsive stage, even where convulsions may have passed off for hours beforehand.

When convulsions have occurred during gestation, or the patient is threatened with an attack without explosion during parturition, permit the woman, unless she has been previously bled, to lose an amount of blood sufficient to quiet vascular and nervous excitement.

Convulsions occurring after parturition arise from a number of causes: they may be produced by conditions existing either during gestation or labor, or from their conjoint influence, these conditions often having been kept in abeyance by treatment. The act of parturition increasing the congestion of the kidney thereby retaining a greater quantity

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of urea in the blood, has been known to give rise to convulsions; reflex excitability produced by uterine contractions, or irritation of the soft parts, by the passage of the head of the child over them during the expulsive stage, can produce them; they may spring from the physical exhaustion arising from the parturient act. In treating these cases, blood-letting is only to be resorted to when there are unmistakable evidences of sthenic power, with unusual vascular and nervous excitability; chloroform is to be used with caution in conditions of exhaustion. Opium in full doses will meet the larger number of indications in convulsions after labor. Should there be suppression of urine, give elaterium following it by diuretics, and apply cups freely over the lumbar region.

The treatment of diseases and complications following eclampsia must be conducted upon general principles, coupled with a proper regard for the physical changes that have been brought about by the parturient act.

Proceedings of Societies.

Virginia State Pharmaceutical Association.

The Virginia State Pharmaceutical Association commenced its second annual session in Norfolk, Va., May 15th, 1883. The delegates were quartered, as previously arranged, at the Atlantic Hotel. They were met at 4:30 P. M. by the Norfolk members and escorted in a body to the hall of the Academy of Music (one of the largest and handsomest rooms I know of), where were assembled a number of the citizens, among whom were some of the fair ladies of our sister city, gracing the occasion with their smiles of approval, which always gives renewed and more determined action to carry forward every good enterprise.

The Association was called to order by the President, Mr. T. Roberts Baker, of Richmond, who introduced Rev. Mr. Armstrong, who opened the session with prayer. Mayor Lamb, in a well-considered and beautifully delivered address, welcomed us to the City by the Sea, with its charter that dated back 200 years to a time when Pharmacy was unknown, and when a veritable skeleton was a safeguard to their premises.

Mr. T. Roberts Baker replied to this address on behalf of

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the Association, and in a well-expressed speech returned thanks for the cordial welcome extended to the Association.

The meeting then adjourned to meet next morning at 10:30 o'clock.

Second Day.—The Association met at 10:30 o'clock A. M. Mr. T. Roberts Baker, President, read his annual address, giving an account of the organization of the Society in Petersburg (May, 1881), and also of its meeting in first annual session in Richmond, May, 1882. He referred to some of the many difficulties the Society had to contend with, not only from outside influence, but also opposition from some druggists; how these difficulties were met and overcome, and the members of the profession who had heretofore opposed it had not only become reconciled, but offered their names for membership, heartily endorsing the objects of the organization and promising their influence in pushing forward the work for which it was organized. It may be just to state that those who have opposed the Association have looked on the organization more as one bearing directly on the *trade* of pharmacists than the *science* of pharmacy, etc., which was a mistake. The object of the Association is to raise the standard of scientific proficiency, and elevate the profession to a position from which they could command the respect of the physician, with whom we go hand and hand in efforts to relieve the suffering of our fellow man, and contribute to advancement in knowledge those who are to succeed us.

Mr. Baker also alluded to the new Pharmacopœia, the changes made in working formulæ, and some typographical errors, suggesting the necessity of calling the attention of the medical profession to the changes, and to inform them whether we work our preparation by new or old formulæ.

After the reading of this address, the Association went on with the regular routine of business, which consisted in reports of the Secretary, Treasurer, etc. The Secretary's report, as well as the Treasurer's was very satisfactory to the members present, and showed a healthy condition, both in growth of membership and financial prospects. At our first meeting in Petersburg we had about twenty present. At our last meeting (May, 1883) our roll showed a membership of 171. There were presented 51 names for election, making a total membership now of 222. We had at our last meeting 69 in attendance, which shows a very flattering interest manifested among the apothecaries of this State, and a disposition not to be behind those of other sections in upholding the science of the profession.

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The Association then went into the election of officers, when the following gentlemen were chosen for the next twelve months: C. A. Santos, of Norfolk, President; Hugh Blair, of Richmond, 1st Vice-President; T. Roberts Baker (the retiring President), of Richmond, Corresponding Secretary; E. R. Beckwith, of Petersburg, Recording Secretary; —— Masi, of Norfolk, Treasurer. The last two gentlemen have held these positions since our organization.

Adjourned to meet at 8½ P. M.

At the time appointed Mr. Santos called the Association to order.

Mr. Thomas, of Norfolk, requested that the time be occupied in hearing replies to queries and also volunteer papers. This proposition was accepted.

Mr. Thomas read a paper on the Progress of Pharmacy. He showed in his paper a perfect familiarity with the subject, and pointed out some of the most worthy suggestions of the present day, dwelling at some length on the metric system. He demonstrated the importance of studying it closely, and thoroughly acquainting ourselves with its application.

As all the addresses were referred to the Business Committee and ordered to be published, I only make mention of these papers as part of the proceedings.

Mr. Hugh Blair having accepted Query 1 (Can the syrups of the Pharmacopœia be preserved from acidifying by the addition of any harmless ferment?), stated that he had not finished his experiments to such an extent as to warrant a correct conclusion; and by permission read a learned and well-digested paper on Fermentation—Its Causes, its Progress and Results; showing its effects on the vegetable and animal kingdoms from its incipiency throughout its growth, to death and decay, fortifying his assertions with quotations from the most learned authorities of the present and past.

Query 2nd. *The Medicinal Plants of Virginia*, was answered by Mr. E. C. Jackson, of Norfolk, in a very concise and satisfactory manner.

Dr. Starke, of Petersburg, exhibited the weights and measures of the metric system. His explanation made the system appear so simple that not one had any excuse for not understanding its application.

Thursday.—The Association was called to order by the President at 10:30 A. M. The minutes of last meeting were read and approved, after which a committee was appointed to report to the Association a Pharmacy Law to be presented this winter to the Legislature. Having presented a bill at

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the last session, the committee deemed a new one unnecessary. The committee therefore reported the old bill with some amendments, which, after undergoing revision in the Association, was adopted as presented.

Mr. Foster, of the firm of Fairchild Bros. & Foster, then exhibited his specimens of pepsin and extractum pancreatis, and showed some very interesting experiments, proving them to be as good, if not better, in their solvent action on albumen, etc., as any preparation that has been put on the market. [As the reporter was unable to keep a record, except from memory, he cannot give the proportions of these preparations that were used in the experiments on starch, casein and albumen, but they were entirely satisfactory to all present, and were closely watched by those who were qualified to judge.]

Mr. Hugh Blair then offered a resolution to consider the best way to regulate the conduct of the drug business on Sundays, both for the good of the principal and employee. [I would like to be able to reproduce his remarks in support of this resolution, but to attempt to do so from memory would be an injustice to the speaker and his subject. His appeal was one that would have reflected credit, not only on many who are gifted in oratory, but it also proved a thorough acquaintance with the physical and moral laws of humanity. He showed it to be absolutely necessary that man should have one-seventh of his time for rest in order that his energies, both of mind and body, should be able to discharge the responsible duties devolved on them. He then viewed the subject from a high moral standpoint, proving that the economy of the Almighty was that the Sabbath should be devoted to glorifying and honoring Him, taking numerous illustrations from the Bible, such as the creation, the many deeds of mercy of the Saviour, many of which were performed on the Sabbath.—*Reporter.*] This resolution lies over until the next annual meeting. It is to be sincerely hoped that it will be favorably considered.

This brought the Association to the close of its work, and for one I can say, and think I can for every member present, that it was one of the most harmonious and most profitable conventions ever held for this or any other purpose.

I will not try to give any description of the banquet. Suffice it to say that the good citizens of Norfolk have rivalled the time-honored hospitality of this good old State, and our visit will ever be kept fresh in memory, and cherished as one of the brightest epochs in our history. * * *

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Book Notices, &c.

Medical and Surgical History of the War of the Rebellion. Part III, Vol. II. Surgical History. Prepared under the direction of JOSEPH K. BARNES, Surgeon-General U. S. Army; by GEORGE A. OTIS, Surgeon U. S. Army; and D. L. HUNTINGTON, Surgeon U. S. Army. First issue. Washington: Government Printing Office. 1883. Royal 4to. Pp. 986–xxix. (From Surgeon-General's Office.)

This volume completes the Surgical series of the History of the War. Since Surgeon Otis' death the entire labor of preparing the work has fallen upon Surgeon Huntington; but he has carried out, with eminent ability and accuracy, the original design of the distinguished author. Surgeon-General Barnes himself lived just long enough to see the work as it was being issued from the press.

This Part is taken up with flesh wounds of the lower extremities, their complications, and operations required for their relief; wounds and injuries of the hip-joint, and their surgery; injuries of the shaft of the femur, and their treatment; wounds and injuries of the knee-joint, with the result of operations devised and practised to remedy the effects; wounds and operations in the leg, with descriptions of excisions, amputations, etc.; wounds and operations at the ankle-joint, with their result; wounds and operations in the foot, and their surgical dressings, etc. Chapter XI considers miscellaneous wounds or injuries. Chapter XII describes wounds, how made, etc., with the resulting complications. In this chapter, the subject of hæmorrhages and ligations receives extended notice. Traumatic tetanus, gangrene, traumatic erysipelas, pyæmia, etc., are all considered in this place. Chapter XIII details the experience of army surgeons with the several anæthetico then popularly used. Chapter XIV is taken up with the organization of the medical staff, and with the materia chirurgica. Chapter XV describes ambulances, hospital cars, hospital boats, and the various methods adopted for the transportation of the wounded.

The sum expended by Congress for the publication of this series of valuable works was small as compared with the general good which results from it. No individual enterprise nor society organization could possibly have afforded to have done the work, which is in reality cheap to the government. May we not hope that a like good judgment will continue in Congress, so as to have enough funds annually

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appropriated to carry out the original desires of those who have done so much to preserve valuable records, and make them of lasting importance and use to the medical world, and thus to humanity at large?

Aids to Diagnosis—What to Ask. By J. MILNER FOTHERGILL, M. D., M. R. C. P. New York: G. P. Putnam's Sons. 1881. 12mo. Pp. 66. Paper, 25 cents. (From Publishers.)

Like most of Fothergill's writings, this essay is just exactly to the point. To the young practitioner it will prove a great help in the trying hour when he is to enter for the first time into the sick chamber to take charge of a case. If he will beforehand carefully read the general directions herein given, much embarrassment and confusion will be spared, and he will be enabled to get an intelligent survey of his case and its surroundings. Many foolish blunders are made and ridiculous questions asked by the uninitiated. We would advise every young doctor especially to study the precepts as laid down in this book.

Multum in Parvo Reference and Dose Book. By C. HENRI LEONARD, M. A., M. D., Professor of Medical and Surgical Diseases of Women and Clinical Gynæcology, Michigan College of Medicine. Detroit: Illustrated Medical Journal Co. 1882. 16mo. Pp. 100. Price 30 cents. (From Author.)

The fact that this is the "34th Thousand" shows the great popularity of former editions of this little book. This revision is an improvement over former issues. It contains, among other things, a list of the latest remedies and preparations, list of doses of drugs of officinal and non-officinal drugs, imcompatibilities, poisons and antidotes, clinical tests of drugs, of urinary deposits, etc., obstetric memoranda, weights and measures, abbreviations, etc., etc. It is a useful *pocket*-book for hasty reference on many occasions when away from other sources of consultation.

Hand-Book of Medical Electricity. By A. M. ROSEBRUGH, M. D., Surgeon to the Toronto Eye and Ear Dispensary, etc. 1883. 16mo. Pp. 54. Paper. (From Author.)

This little hand-book first considers the diseases in which electricity has been found to be most serviceable, then describes the different forms of electrical applications, and then, after mention of some other batteries, gives special prominence to the description of a battery of the author's

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own design. This battery has the voluntary endorsation of no less an authority than Dr. A. D. Rockwell, of New York, whose special eminence in electrology is not limited in reputation to this country. The little work will be found a useful guide for the electrical treatment of many common affections.

What to Do in Cases of Poisoning. By WILLIAM MURRELL, M. D., M. R. C. P., Lecturer on Materia Medica and Therapeutics at Westminster Hospital, etc. Second edition. Detroit: George S. Davis. 1882. 32mo. Pp. 96. (From Publisher.)

A most valuable vest-pocket reminder when called in haste to attend a case of poisoning. Simply the name of poison used is given, with generally a mention of the fatal doses, and the antidotes or remedies, and how to use them. The doctor would do well to keep this book with him all the time; it will here and there prove to be the very friend he needs immediately on hand. Nothing is more painful than to be called in to see a case of poisoning—especially if by a common agent—and then have to confess forgetfulness as to the antidote or the physiological remedy, or how to apply them.

Speech and Its Defects. By SAMUEL O. L. POTTER, A. M., M. D., Author of "Index of Comparative Therapeutics," etc. Philadelphia: P. Blakiston, Son & Co. 1882. 16mo. Pp. 117. Cloth, $1. (From Publishers.)

This is the "Lea Prize Thesis of Jefferson Medical College," published by permission of the Faculty. The subject named in the title is considered "physiologically, pathologically, historically, and remedially." The principal subject studied, as it relates to practitioners, is *dyslalia*—stammering stuttering. The chapters on causes, diagnosis and treatment are especially practical, and we would recommend every physician to make himself fully conversant with the teachings of this little monograph. The author is bold in exposing by name and description the tricks practised by travelling charlatans and quacks on this subject who generally style themselves "Professors." He has thoroughly studied dyslalia, and presents the approved plans of treatment of this unfortunate impediment of speech. The book is really so practical that its teachings should encourage the worst of stammerers to be hopeful of decided improvement—if not of positive cure—if he will only persevere in carrying out the directions given.

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Practitioner's Ready Reference-Book. By RICHARD J. DUNGLISON, M. D. Third Edition. Thoroughly Revised and Enlarged. Philadelphia: P. Blakiston, Son & Co. 1883. 8vo. Pp. 529. Cloth. Price $3.50. (From Publishers.)

This is intended to be "a handy guide in office and bedside practice." It contains the odds and ends of information regarding which the busy practitioner is constanly required to have his memory refreshed, but which information he generally has not the time to look for in the systematic works on medicine at the moment he most desires it, For instance, it gives the tables of the several weights and measures, solubility of medicines, abbreviations, thermometric scales, rules of medical etiquette, doses for children and adults—by mouth, enema, hypodermically, etc., how to medicate baths, simplified pharmacopœial (1881) groups, prescribing hints, tables of differential diagnoses, obstetric memoranda, urinary examinations, treatment of poisoning, suffocation, drowning, etc., hygienic instructions, etc., etc., etc. The work is well indexed, so as to facilitate speedy references. The book as now improved is an exceedingly useful one to every practitioner and writer. This third edition contains all that was in the two previous editions, and much more that is valuable. We cordially recommend it to fill the purpose for which the book was designed.

Lectures on Orthopedic Surgery and Diseases of the Joints. By LEWIS A. SAYRE, M. D., Professor of Orthopedic Surgery and Clinical Surgery in Bellevue Hospital Medical College, etc. Second Edition. Revised and Greatly Enlarged, with 324 Illustrations. New York: D. Appleton & Co. 1883. 8vo. Pp. 569. Cloth. Price, $5. (For sale by Messrs. West, Johnston & Co., Richmond.)

On the title page we are informed that these "lectures" were "delivered at Bellevue Hospital Medical College during the winter session of 1874–'5." But one who compares this with the first edition of 1876 will see at a glance that the book, as now issued, has been so altered, revised, increased in volume and in value, and approaches so nearly to perfection for such a work, that he is not apt to refer any longer to the edition of 1876. The edition of 1883 will be the one for present consultations on all subjects relating to orthopedics. For instance, the chapters on spondylitis and lateral curvative of the epine have been entirely re-written. The entire work has been re-arranged, and subjects have been classed in a systematic order. Some new sections have been introduced in various parts of the book, and fifty-two illus-

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trations have been added. Hence, we find that much new matter has been incorporated in the present edition. Why speak further of this book—by an author whose originality of design and genius of application of remedies, etc., has made the age in which we live memorable in the history of surgery? He who does not now recognize Dr. Sayre as *the* author of the age, on most all orthopedic questions, almost thereby confesses himself ignorant of what has been accomplished in this special line of practice.

Alcoholic Inebriety, from a Medical Standpoint, with Cases from Clinical Records. By JOSEPH PARRISH, M. D. Philadelphia. P. Blakiston, Son & Co. 1883. 12mo. Pp. 185. Cloth. Price, $1.25. (From Publishers.)

The special opportunities Dr. Parrish has had for studying this vitally important subject have been improved; and as a result we have before us the most valuable monograph on alcoholic inebriety that we know to be in print. The author bases his remarks on the records of cases that have been under his observation and study. There can be no doubt of the possibility of cure of the inebriate whose friends will surrender to the proper parties sufficient authority to control the craving appetite for a sufficient length of time. Many interesting and instructive cases are mentioned, with their causes and the methods of cure adopted; and much important information is given which should be so popularized as to become familiar in every household. Proper education of the people alone will do much in many instances to prevent the development of this preventable disease. Not only to the profession but to the laity as well do we recommend the careful study of this well-written and impressive book.

General Medical Chemistry. For the Use of Practitioners of Medicine. By R. A. WITTHAUS, A. M., M. D., Professor of Chemistry and Toxicology in the Medical Department of the University of Vermont, and of Physiological Chemistry in the Medical Department of the University of the City of New York, etc. New York. Wm. Wood & Co. 1881. 8vo. Pp. 443. (From Publishers.)

This was the August, 1881, Number of "Wood's Library of Standard Medical Authors." How it escaped earlier mention in this department, we cannot surmise, unless it be on the supposition that it was taken from our editorial table by some "good-intention friend" without permission, and not returned in time for appropriate notice. However kindly

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disposed our visitors may be to help us out with book notices by examining publications received and informing us of their contents and their value, we must still ask such visitors not to remove any books from our office without special permission. The book before us is particularly suited to the wants of a physician and pharmacist. It is practical; as *doctors* would apply that word to a work on chemistry, for even the oldest of the educated practitioners can understand this book, and get from its pages the precise information he seeks in reference to the chemistry of animal tissues, fluids or pharmaceutical article or poison.

Materia Medica for Physicians and Students. By JOHN B. BIDDLE, M. D., Late Professor of Materia Medica and General Therapeutics, Jefferson Medical College, etc. Ninth Edition. Revised, Rewritten and Enlarged, in Accordance with the Sixth Revision of the U. S. Pharmacopœia. By Clement Biddle, M. D., U. S. Navy. With Numerous Illustrations. Philadelphia. P. Blakiston, Son & Co. 1883. Small 8vo. Pp. 537. Price, Cloth, $4; Sheep, $4.50. (From Publishers.)

One familiar with the former editions of this old stand-by will recognize in this edition his old friend in a new dress. It is received with a cordial welcome by every practitioner and student who has known the excellence of its former issues. But time has wrought its changes even in this book, and it is now as much modernized as the latest prepared book. Indeed, it is the first text-book on Materia Medica published since the new revision of the U. S. Pharmacopœia, with which it has been made to correspond. Almost all the new preparations of the regular pharmacist that have come into recent use have been added. The sections on botany have been condensed so as to give more space to the rewriting of the sections on the physiological action of drugs. A chapter on the metric system has been inserted; but the doses as given in the text are given with the Troy or apothecaries' signs, as formerly. The classification of remedies has been changed or re-arranged so as to correspond with the physiological rather than the empirical effects of the drugs. The systems of the "new chemistry" have been adopted. Some notes on the Chinese Materia Medica, as compared with that of the U. S. Pharmacopœia, have been appended. A serviceable feature of the present edition is that of interleaving a few blank leaves with the text for notes and memoranda. All in all, the present work is well prepared, well edited and well issued, and is very suitable to the wants of physicians and students.

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Cerebral Hyperæmia. Does it Exist? A Consideration of Some Views of Dr. Wm. A. Hammond. By C. F. BUCKLEY, A. B., M. D. Formerly Superintendent of Haydock Lodge Asylum, England. New York. G. P. Putnam's Sons. 1882. 16mo. Pp. 129. Price, $1. (For sale by West, Johnston & Co., Richmond.)

We have been much interested in the perusal of this little work. It gives support to some convictions of our own on the subject, which differ from those avowed by Dr. Hammond. But at the same time we apprehend that Dr. Buckley has entered into the discussion with too much of a purpose to disprove *all* of the principal teachings of Dr. Hammond on the general topics under consideration to disrobe himself of some of the unnecessary dress of a partizan debater. If Dr. Hammond has gone entirely too far in all his statements, Dr. Buckley has undoubtedly led his readers into an inference from his writings which, if too generally adopted, would as surely do damage. If it has been given to a few to stand unharmed the wear and tear of inordinate study and wakefulness, it is more unquestionably recognized as a fact by general practitioners that few things so completely weaken brain force and physical energy as incessant wakefulness, and hence ultimately leads to permanent impairment and premature decay. But we are more disposed to look to the inherent active functions of what are termed brain cells themselves for explanations of sleep, wakefulness, etc., than solely to the condition of the cerebral circulation. It is easier for us to explain brain functions upon some such theory than to attribute their activity to hyperæmia alone.

International Cyclopædia of Surgery. Edited by JOHN ASHHURST, JR., M. D., Professor of Clinical Surgery, University of Pennsylvania, etc. Illustrated with Chromo-Lithographs and Wood-cuts. In Six Volumes. Vol. III. New York. Wm. Wood & Co. 1883. Large 8vo. Pp. 760—xl. (From Publishers.)

Not only have the general scope of this Cyclopædia and the excellent selection of the authors for the several contributions, as announced by the Editor, given merited popularity to this publication; but the marked ability and completeness characterizing the articles that have appeared in each of the volumes now published justify the promise that this "systematic treatise on the theory and practice of surgery by authors of various nations" will prove to be the standard authority on surgery for years to come. The authors and titles of articles in the volume now before us (Vol.

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III) are as follows: Dr. P. S. Conner, of Cincinnati, on Injuries and Diseases of the Muscles, Tendons and Fasciæ; Edward Bellamy, F. R. C. S., on Injuries and Surgical Diseases of the Lymphatics; Dr. John A. Liddell, A. M., New York, on "Injuries of Blood-vessels;" Dr. John A. Wyeth, of New York, on Surgical Diseases of the Vascular System: Richard Barwell, F. R. C. S., on Aneurisms; Dr. M. Nicaise, of Paris, on Injuries and Diseases of Nerves; and Dr. Edmund Andrews, LL. D., of Chicago, on Injuries of Joints. Not only does this work represent the latest teachings of other authors, but it contains much that is original and valuable. Our limited space does not allow us to speak of the special articles and of their merits; hence we have to content ourselves with the advice to all practitioners of surgery in particular, and physicians in general who are often compelled to consult such works, be sure to add this Cyclopædia to the doctor's library. It will be of almost daily use to every one in practice—either for general consultation, or for the purpose of obtaining specific details.

System of Human Anatomy. Including its Medical and Surgical Relations. By HARRISON ALLEN, M. D., Professor of Physiology in the University of Pennsylvania, etc. Illustrated with 380 Figures on 109 Plates, Many of which are Beautifully Colored. Also upwards of 250 Wood-cuts in the Text. *Section IV.—Arteries, Veins and Lymphatics.* Philadelphia. Henry C. Lea's Son & Co. 1883. Royal 4to. Pp. 125. Price, per Section, $3.50. Complete in Six Sections. (From Publishers.)

There is no work on anatomy of recent publication in any country known to us of equal excellence to this "System." The drawings which so profusely illustrate the work are by the skilled draftsman and artist. Hermann Faber, from dissections made by the author. We cannot see how either the professed anatomist, demonstrator of anatomy, private tutor and operative surgeon especially can consent to be longer without this book; and every physician who proposes to keep his memory refreshed on anatomical matters should have it. It is also of very particular value to country doctors, to whom opportunities for dissections are extremely rarely, if ever, permitted. Each "Section" of the "System"—to be completed by the early publication of two more Sections—is in itself a perfect treatise on special regions or certain organs or tissues of the human body. Thus, one Section was taken up with the skeleton; another with the muscles and fasciæ; the present one considers exhaustively the anatomy of the arteries, veins and lymphatics. For con-

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venience of transportation, preservation or filing, each "Section" is sent by the Publishers in a neat portfolio, with suitable bands for closing, etc. Simply as a work of taste in the general "get up" of the several Sections, the publication furnishes a model of elegance and usefulness that we have never seen excelled, if equalled. The entire work must meet with the unqualified approval of every one who recognizes the value of anatomy, and can appreciate accuracy of drawing and description, with neatness and beauty of publication.

Transactions of American Medical Association. Vol. XXXIII. 8vo. Pp. 669. Philadelphia. 1882. (WM. B. ATKINSON, M. D., Permanent Secretary; JOHN L. ATLEE, M. D., Philadelphia, President.)

This, we presume, will be about the last of the separate volumes of *Transactions* of the American Medical Association to be published. Hereafter, it is to be hoped, the proposed journal form of publication will be established, and thus papers read at the Association sessions will have more of freshness as they are issued to the public. It seems to be the fault of none of the officials of the Association to whom its publishing interests are committed that heretofore the *Transactions* have appeared so tardily. But with the utmost practicable effort, the Publishing Committee has not been able to distribute this volume, as in the present instance, to members until about nine months after the last session adjourned. A full synoptical report of each of the more important papers contained in the volume now under notice appeared, as a rule, in the leading medical journals of the United States last June and July. Many will therefore fail to be interested in the present publication—the subjects herein treated of having already been given to the profession.

PAMPHLETS, REPRINTS, ETC., RECEIVED for which we have no room for fuller notice, etc.; but most of which can be obtained by enclosing a letter stamp for pamphlet to the respective authors named.

Best Method of Treating Operative Wounds. By HENRY O. MARCY, M. D., Boston, Mass. 12mo. Pp. 16. [In this paper, read before the American Academy of Medicine, Philadelphia, October 26th, 1882, Dr. Marcy specially recommends "Listerine," as prepared by Messrs. Lambert & Co., of St. Louis, as a trustworthy germicide in surgical operations, etc.]

Buffalo Lithia Springs, Va., Health Primer. 8vo. Pp. 24. Col. THOS. F. GOODE, Proprietor.

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Editorial.

The Status of the New York Medical Society and its New Code have, of late, been the subjects of much vindictive, unjust and uncompromising criticism. Some parties—always to be looked for among the noisy of the supposed *popular* surface—have been blatant denunciators of the proposed reformation and of the motives of the parties who have too boldly rushed into avoidable danger. We are not among those who regard the Code of Ethics of the American Medical Association as a thing born of God or of holy inspiration; for we see in its inevitable teachings too many things which are of the earth, earthy. But we do recognize that Code as the professional law of the land, and as such we obey it. However desirable—with certain limitations or modifications—may have been the changes proposed by the New York Society in this National law or Code, that State Society manifested too much of a revolutionary spirit in doing as it did. As a matter of prudence, at least, the day has not yet come for the justification of such a step as has been taken. Of course the New York Society fully understands that its action was one of self-excommunication—it was a secession—a principle which that State helped to decide only a few years ago as untenable as to matters of union of sovereignties. The cause of this secession should have been made subject of discussions before the American Medical Association; and modification of the laws which bind all the rest of the profession of the United States, should there have been sought. If we thought any influence of ours could persuade the New York Society to rescind its lately enacted Code, and restore itself to recognition in the American Medical Association, and there seek the reformation it has rashly undertaken, single-handed as it is, we would gladly devote our best energies to the restoration of professional harmony throughout the country, while at the same time even seek a fair, honest, non-partizan discussion, and decision upon the merits of the question. We venture the assertion that some modification at least, in the National Code, would then have resulted in fewer years than is apt now to be the case. Forcible opposition has not always the strength of quiet persuasion and conviction. Feelings become too much involved to temper reason with proper judgment. The American Medical Association can yet afford to be forbearing. Let us hope its decisions in regard to this matter will not be too severe.

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Personals, Items, etc.—*Mr. John W. Pierce*, of the well-known firm of Messrs. Polk Miller & Co., of this city, attended the late session of the Virginia State Pharmaceutical Association in Norfolk; and it is to him that we are indebted for the good reports we give in this number. Whatever he does is well done, as every body acquainted with him knows.——*Warner & Co.'s Sugar Coated Pills.*—Dr. Chevalier Cassimire Manassei, First Doctor of the Hospitals and Professor and Director of the Royal Dermo-Siphilopatic Clinic, of Rome, says of these pills—particularly those of phosphorus $\frac{1}{100}$ grain, and extract of nux vomica $\frac{1}{4}$ grain—that they are especially useful in nervous diseases, anæmia and general debility. A case of ataxia was greatly improved. Of "wind dyspepsia," it is curative. It is excellent in hysteria. He thinks this preparation, as well the sugar coated pills of quinine, as prepared by this firm, a real acquisition—especially because of the purity of the materials employed, and the kind of preparation.——*History of Tuberculosis.*—Messrs. Robert Clarke & Co., of Cincinnati, announce this work as being in press—translated, in part, with additions, from the German of Dr. Arnold Spina, including also Dr. Robert Koch's experiments. This 12mo. book by Dr. Eric E. Sadtler, traces the history of the disease from the time of Sylvius to the present day. Price $1.25.——*Dr. Roberts Bartholow* has been chosen Dean of the Faculty of the Jefferson Medical College, Philadelphia—Dr. Ellerslie Wallace having resigned that position on account of prolonged sickness.——*During the late session of the Georgia Medical Association*, Dr. A. W. Calhoun, of Atlanta, was elected President, and Dr. James A. Gray, 30 Marietta street, Atlanta, Ga., Secretary. It was, in all respects, a pleasant and profitable session.——*Avina Sativa.*—The article by Dr. Wm. B. Gray, in the March No. of this journal, inadvertently represented this article as the product of the "wild oat," whereas he intended to say of the *common oat*, from which only it is prepared.——*The Journal of the American Medical Association* will be a topic of much interest to the profession at large to be discussed during the approaching session. We think it worthy the attention of the proper committee to consider the suggestion whether or not there should be an Associate or Assistant Editor in each of the several grand divisions of this country so as to be fully representative of the general views of the profession of the entire United States. Of course there should be the Editor in chief, with extra powers and a handsome salary, whose home should be at the office of publication.

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VIRGINIA

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Original Communications.

ART. I.—(I) **A Somewhat Rare Disease of the Spermatic Cord, Testis and Scrotum. (II) Encysted Cancer of the Spermatic Cord. (III) Case Showing Family Hereditary Tendency to Hydrocele and Diseases of Scrotum.—Remarks.** By JOSEPH H. WARREN, A. M., M. D., Member of the Judicial Council of American Medical Association; Member of British Medical Association; Member of Massachusetts Medical Society; Honorary Member Vermont State Medical Society, etc., etc. Boston, Mass.

CASE I.—Mr. James G. W., of New Mexico, consulted me the latter part of January, 1883. The following is the history of his case as he wrote it out and gave it to me:

"While residing in San Francisco in the summer of 1878, I first noticed (by putting my finger on the ring) a round hard lump filling the opening. This became especially apparent when the legs were stretched somewhat apart. The lump appearing to increase in size, I consulted Dr. Dorr—then my family physician. He pronounced it to be a slight hernia of the omentum, and advised me to do nothing, as it was not likely to give me trouble and would probably disappear in time. In a few months, the lump diminished and finally entirely disappeared.

"Three years later, in the summer of 1881, while residing in Santa Fé, N. M., the lump again made its appearance in the same place with identical symptoms. For several months,

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I paid but little attention to it, thinking it would disappear as at first; but it gradually increased, coming down lower in the scrotum, until some five or six months after its appearance I called on Dr. Longwell—a resident physician of Santa Fé—to examine it. Dr. Longwell pronounced it to be inguinal hernia, and advised me to procure a truss as soon as possible. I found it difficult to believe that it was hernia; but the Doctor was positive—'as positive,' he said, 'as if the parts were exposed and plain to view; there was no doubt about it.' For a week or two, I wore a home-made truss, but pressure upon the lump caused intolerable pain. As it was impossible to procure a suitable truss in Santa Fé, I went to San Francisco in October, 1881; and, upon arrival, called upon Dr. McNutley—an eminent physician of that place. He was somewhat puzzled on examination of the lump; could not think it a hernia. 'It is,' he said, 'about the size of a testis; feels like a testis, and not unlikely it is an additional testis descending into the scrotum.' He desired that I should advise with some other surgeon; and upon his recommendation, I called at Dr. Hubbard's office to get his opinion. On examination, Dr. Hubbard pronounced it inguinal hernia, and made an attempt to reduce it. The effort giving me some pain, he stated that he could reduce it, but would have to put me under ether. On the next day, after advising with Drs. McNutley and Hubbard, I was examined by Dr. Isaac Rivers (then attending physician upon my wife's family), who was unable to form an opinion of its nature, but requested that he might bring a friend of his, Dr. Revecci, an Italian surgeon of some note, to examine it. On the next day Drs. Revecci and Rivers made a thorough examination, and found it to be hydrocele of the cord. Three days later, these physicians operated upon the tumor, aspirating it, entirely emptying the sac, and tightly bandaging over the place. This proved ineffectual to effect a cure—the lump appearing one week after the operation. For some months, I paid little attention to it, it giving no inconvenience at first. In February, 1882, the tumor was again operated upon by Dr. Seiber, of Santa Fé, N. M., and iodine was injected. A good deal of inflammation ensuing, confined me to my bed some ten or twelve days, but the tumor shortly after made its appearance. I sought advice from Dr. Symington, of Santa Fé, Dr. Bertelette, of the United States Army, stationed at Santa Fé, and some others; and on one occasion had the tumor tapped and a portion of the contents withdrawn. By this time, however, the substance form-

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ing the tumor had become so thick that it was found impossible to empty the sac, or withdraw more than a portion of its contents. At this stage, during the latter part of the year 1882, the tumor slowly increasing in size, I decided to come East to have an effectual operation performed. Arriving here [Boston] January 26, 1883, I called upon Dr. Jos. H. Warren and Dr. Cheever—the latter stating upon examination that he suspected a complication of inguinal hernia together with the hydrocele; and that very probably I should always have to wear a truss after any operation, and further that an operation would relieve only the hydrocele, but would involve some risk, etc.

"Dr. J. H. Warren examined it, and considered it to be a diffusible hydrocele, having become thickened in its contents much like an ovarian cyst in the female, and I submitted to his operation on the 30th day of January, 1883."

With the assistance of Drs. Temple and C. E. Warren, I performed the following operation, after etherizing, under strictly antiseptic precautions:—I commenced my incision about half an inch above the epididymis of the testis, and extended it up to the outer inguinal ring. Before making this incision, I passed a fine explorating trocar down to within half an inch of the bottom of the tumor; and finding no fluid, tipped the sharp end of the trocar upward and brought it out about one inch above its entrance. Now, after the incision, I cut down through the sac to the trocar; and after dissecting very carefully, I came upon the contents of the tumor. The sac of the tunica vaginalis I found very much thickened and very tough to cut. It was about the thickness of a good chamois skin, and felt so to the touch, though it was roughened on the inner surface. It was like a skin dressed out to be softened before rubbing. I now laid open the sac the whole length of my first external incision, and found it filled with multilocular cysts that contained a jelly-like substance, much like that seen in ovarian tumors; and in appearance and consistency, resembling the common calf's foot jelly used on the table. These cysts varied in size, some not larger than a pea, others as large as an English walnut, and a few that were detached while operating on the upper part of the cord had a very small, fringe-like pedicle attached to the walls of the sac. The blood-vessels, nerves and spermatic cord passed freely through the tumor and the walls of the sac, which were adherent all the way from the bottom of the sac of the tumor to within an inch of the internal ring. There was a very long and tedious

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process of dissection to separate and remove the sac from the spermatic vessels, which was finally accomplished, the operation thus being necessarily very much prolonged, occupying nearly two and a half hours. After separating the sac and tumor we drew down the same through the outer ring; and, having satisfied ourselves that we had got above the tumor and all diseased tissue, a stout silken ligature, well carbolized, was passed through the centre, and each part was firmly tied. Then the ligatures were passed around the entire pedicle, making a firm fastening, and it was treated in every way as suitable to the pedicle of an ovarian tumor. About half an inch below this ligature, a galvano-cautery loop was passed around, and the tumor was separated between the outer and inner rings. And now the stump was pocketed, the wound drawn together, the silken ligatures allowed to protrude from the external opening of the wound to act as a drainage above, and a small rubber drainage tube was passed in up to the end of the parts where the tumor was severed.

The tumor was examined by Dr. Temple and my son, and the following is the report of the same:

"The tumor consists of numerous cysts; held together by firm fibrous tissue. The cysts vary in size from a pea to a walnut. The wall of each individual cyst seems to vary with its size, being thicker in the larger cysts. The contents of the cysts is the same, irrespective of size; it consists of a thick, gelatinous mass of a pale amber color, similar to the so-called colloid of the ovarian cysts.

"*Microscopically*, the mass was composed of numerous large, round epithelium cells, a few columnar epithelia, a few red blood globules, some few fat; many granular cells about the size of renal epithelium; these are round, transparent—the granules having a well-defined outline. The cyst wall was composed of fibrous tissues, the interstices containing cells of the same granular character as those above described; these increased in number from the outer towards the inner surface, where they were clumped together, forming an almost uninterrupted line. These cells were not affected by ether or acetic acid. The wall also contained blood-vessels filled with corpuscles."

The growth resembled a long gourd, the larger end in the scrotum, and extending up near the inner inguinal ring. It was about five inches in length, and one and a-half at its lower end, and three-quarters at its upper part where we ligated and cut it off. There was no appearance, as examined under the microscope, of any malignancy or cancerous growth about it.

This is one of the rarest diseases of the spermatic cord and

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scrotum that I have ever seen. I can find no mention in Sir Astley Cooper's work of anything like such a case, except where he speaks of a colloid cancer. No mention is made of it by Curling in his work on the Testes, nor do I find anything like this mentioned in any of the current works on surgery, nor have I seen a report of any such disease in any of our medical journals. I think this is the only case of the kind operated on in this city, and the only time that the galvano-cautery has ever been used to sever a pedicle in a male patient, although very commonly used in the female patients for this purpose.

At one period of the operation I did not know but that I should have to open the abdominal cavity, as in some cases of herniotomy, to secure the diseased tissue high enough to remove it all; but owing to the lax and yielding nature of the external ring, and by the application of some considerable force, I was enabled to draw the tumefied mass through the external ring sufficiently far to gain my point of ligation above all the diseased parts, or where it seemed to be free from all appearances of disease. The ligature came away on the fourteenth day, and the patient made a rapid recovery, so that on the 24th of February he was enabled to return home to New Mexico—a well man.

This tumor would seem to be in construction like an ovarian tumor—as nearly like it as we can get one in the male. All who had operated on it examined it and made a wrong diagnosis, as well as myself. At the time of examining it, I felt greatly in doubt about the correctness of the diagnosis I had made. Some had pronounced it hydrocele of the cord and a hernia of the omentum combined; and it would seem that the patient had consulted some of the best surgeons we have. I thought it was a hydrocele of the cord with a greatly thickened sac without any rupture, and so pronounced it; but this, it would seem, although very near the mark, was not the true case, as was proved when I came to operate.

I made out my diagnosis to be diffusible hydrocele of the cord for the following reasons: In hydrocele of the cord, cystic or diffusible, we get not entire disappearance within the rings of the diffusion, as we do in any kind of rupture,

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unless there are adhesions; and we can follow the adhesions; and then if it be omentum, or the intestines or gut, we have distinct and somewhat irregular lumps or bunches not unlike the feeling of the mesenteric glands as often felt through the very much emaciated patient's abdominal walls. Again, the patient lying down, when the hernia is returned, it goes back with a sucking sound, sometimes making a gurgling noise, which failed to be produced in this case. In an erect position of the patient, a hernia—omentum or intestines—comes out gradually, not as in this case all at once; and it is at its full size and not any larger the longer it stands. But the tumor of this patient would continue gradually to grow larger and larger for a number of months. Then, again, we got no impulse by coughing, as we do in all cases of hernia, except in some large and adherent hernial omentum; but even in those extensive adhesions and thickenings of the sac, you will always get a perceptible impulse, as you could not in the case of this patient's tumor. But if you are in the habit of examining hernia, it is very generally apparent to see the difference in many ways from diffusible or cystic hydrocele of the cord, such as complained of by this patient. There is a sense of strangulation, of nausea and tenderness of the internal rings in almost all cases of hernia of the omentum or intestine. The rings are tender; when you press the finger into the rings the patient will flinch; but in cases of hydrocele of the cord, there seems to be no great tenderness and soreness as in hernia; at least that is so in all the cases I have examined. Although it often requires a very fine distinction, yet by a careful analysis, we can generally, with a certain amount of surety, make out a distinction between the two affections—hernia and hydrocele. The light of a candle in a darkened room is an old and sure way of distinguishing the two affections; but by a little practice this may not be necessary to a correct diagnosis of these diseases.

Case II.—*Encysted Cancer of the Spermatic Cord.*—I next wish to call your attention to a rare affection, and that is an encysted cancer of the spermatic cord.

I lately had a young man, twenty-one years of age, other-

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wise well, a native of Maine, on whom I had operated early in the fall for a scrotal hernia, and cured by the subcutaneous method which I practice freely. At the time of operating on him for the hernia, I noticed he had a varicocele, and a hard, little, encysted tumor just above the epididymis—say about a half or three-quarters of an inch above. The varicocele was cured together with the hernia; but this hard tumor which he had noticed began growing within the last year, and seemed to be now rapidly developing and growing larger week by week.

On February 1st, with the kind assistance of Dr. Temple, I operated and removed this little encysted tumor which had grown to the size of an English walnut; and as far as the appearance of it went, without the aid of a microscope, it was that of a scirrhous tumor or cancerous growth. It was somewhat hard and gritty, of a dark bluish appearance, looking, through the walls of the cyst, something like a very large varicose vein. The structure was quite hard, and yet could be easily turned, and when separated, it had a sharp, roughened feeling, and a sensation of decomposing tissue that was pretty hard or as if partially dried a number of hours after removal. The parts were brought together, a small rubber drainage tube inserted, a dressing of carbolized cotton applied and some considerable suppuration followed, but it healed without any trouble by granulation. The patient is now well.

Soon after operating he had considerable pain in the inguinal region, and this pain, I have noticed, always, or most always, follows an operation for varicocele or any similar affection, of which I have treated quite a number—not far from one hundred and fifty—within the last few years.

In those cases of varicocele which I have treated by two small, short incisions in the scrotum and passing a silver wire around the varicose veins and returning into the scrotum again, I have been successful with the exception of one.

This one, the son of a physician and a student of Harvard, aged 21, very strong and athletic and a runner and performer of other gymnastic exercises, I operated on in this way, which was almost subcutaneous as described above; but in about a year afterwards he came to me with a varicocele nearly as large as at my previous operation. He had been exercising very freely, and after a long race this came on. I operated according to the method of Dr. R. Harrison,

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of Liverpool, by cutting down and tying a large number of veins—about seven. To the net-work that is distributed through the vas deferens and the epididymis, I applied the actual cautery to destroy the greater portion of this net-work of veins, leaving only sufficient to carry on the future nourishment of the testis. Considerable swelling and suppuration followed, but in fifteen days my patient was fully cured, and that most substantially.

I would, in all operations for varicocele which are very large, and where the subcutaneous method might be doubtful in promise, resort to this operation of Dr. Harrison, as it is a most beautiful and favorable operation to effect a permanent cure.

CASE III.—*A Remarkably Interesting Case, Showing a Family Hereditary Tendency to Hydrocele and Diseases of Scrotum.*—In the spring of 1854, W. P. E., aged 22, native-born, of goodly American parentage, consulted me for a hydrocele elephantiasis of the scrotum and cancer of the right testis. His history was that soon after puberty, while at play with some companions at foot-ball, he received a kick in the scrotum that was intended for the ball by one of his companions. From that time, he began to notice an enlargement of the parts with a very gradual distension of the scrotum. This gave him but little acute pain, though he experienced a sense of great fatigue and weight from any exercise like walking or standing, and this increased so as to become almost unbearable. From his occupation as a school teacher, he was necessarily on his feet much of the time, and this greatly increased his embarrassment from the rapid distension and increased weight of the parts; at the time of my seeing him, it had extended to his knees. He became very importunate for me to do something to relieve him of his present embarrassment and suffering, which had become very depressing—morally as well as physically.

Not feeling confident what was the wisest course of treatment to pursue in this case, I took him with me to consult the late Dr. John C. Warren. After arriving at the residence of Dr. Warren, I left the patient on the outer step to wait whilst I went in to see if the coast was clear for me to show Dr. Warren my patient. I was very timid, and had great respect for my seniors and superiors in the profession at that time, and no man ever impressed me with that God-like fear and awe before or since as did this distinguished and most courtly and stately surgeon. I still retain a vivid remem-

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brance of that proud, cold, aristocratic bearing, coupled with hat graceful and gentlemanly professional air—an air acquired only by long continued and thorough culture and native-born refinement. I found Dr. Warren very much interested and occupied at this time with bird tracks on a large lab of shelving stone from the Connecticut Valley, sent by he late Dr Dean, of the western part of this State. After e had given me a lecture on ornithology and a general esumé on all the then known tracks of birds that had been ound and examined by him, and shown me many of those nmense slabs of stone he had lining the entrance of his all and the greater part of his lower library walls and floor, endeavored to get an opportunity to speak to him of my atient. But, going from buzzards, web-footed water fowl sand-snipe, so much enthusiam and interest did he display his lecture on ornithology, that I felt I could not, without oing from the sublime to the ridiculous, approach very easily he object of my call; and so retiring to call the next day by is invitation to assist and witness an operation for a small broid tumor on the hip of a very fat and puffy old lady, I ent out and explained to my patient the condition of things. On the morrow, I showed Dr. Warren my patient, and ter an examination, and when we had retired from the resence of the patient, he said, "Young man, you will have othing to do with this case," adding, "I have operated any a time for this and similar affections, and all the pants have died at or near the time of operation; at most, t few have lived beyond a month or two from the time of y operation." This was to me a sticker; so in my trouble went to Dr. Edward Warren, who was living at that time ar me in the town of Newton. I explained to him the gency of the case and the necessity of something being one. The patient was willing to undergo anything which ould promise relief from his suffering, which had now bemme intense, and the patient had argued the impotency of edical science; and his argument had gained strength from e fact that, as he said, he was willing to run any risk and ide by the result, and he could not see any reason why, if was so freely to offer himself, our profession should not be lling to lend a hand and perhaps profit by his case and exrience in some other future similar affection. His parents w joined their forces with those of my patient, and had no tle effect. They were very apprehensive indeed of a fatal rmination of his life by his own hands, as hypochondriasis d cast its gloom over the spirits of the patient. On fur-

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ther consultation with Dr. Edward Warren, we agreed to operate and see what could be done for him, although giving but little hope or encouragement of a favorable termination to whatever we might do. On the 10th of May, with Dr. Edward Warren's assistance, I operated by following near the natural line of demarkation between the right and left testes, and castrating the patient on the right side; we found the skin and tissues comprising the scrotum and covering of the testes so thickened as to be fully an inch through. We ligated the spermatic and a branch of the sub-pubic artery. At this stage of the operation (I had some very coarse saddler's silk ready prepared), and, to the surprise of Dr. Warren, I began to fill in the cut, so as to enclose nearly a quarter of an ounce of this. I had previously cut the silk in strands of some four or five inches long. Then I brought the parts together and secured them with silk stitches pretty finely inserted. I now explained to Dr. Warren my intention of letting this silk act as a seton, and to withdraw now and then a strand at a time—not allowing the parts to heal until I had seemingly let the greater part of this thickened tissue be reduced by suppuration and slow granulation, letting it fill up as I withdrew the silken strands. He expressed himself much pleased, and thought I would be successful, and it proved so to be.

I afterwards called on Dr. J. C. Warren, and found that his brother had told him my manner of treating this unpromising case. He was much pleased, and told me that if I would in all my future life lean on myself and do my work with the same original thought which had been apparently used in this case, "following what seems the natural course to you," he said, "in every operation, you will be useful to yourself and others in the profession; for this is the great fault with many men now coming into the profession. They do not think or have independence to act for themselves, but lean on the arms of others who will never assist them to accomplish anything great in a professional life without the aid of their own best efforts. And while I would by no means have you ignore the instruction to be gained from the experience of others, yet to follow precisely in their tracks and call it conservatism, makes a very narrow path in any man's progress, but particularly in that of the practice of medicine."

This patient had a cancer of the testis, involving the greater part of the lower half of the scrotum, all having become completely fused into one solid mass of nerves,

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ood-vessels and veins. Two pints of syrupy, treacle-like
id was drawn off at the time of operating. The patient's
ogress was slow, but he made a full recovery, and has had
recurrence of the disease, and has enjoyed good health
er since, being now the happy father of a son.

His father, J. C. E., said he thought this affection had been
reditary in the family, particularly that of hydrocele, as
himself, and his two brothers, had suffered from hydro-
e in their younger days. His own father had one also,
ething like the case of his son. Of his own case and
t of his brother, it may be said they seemed to spon-
eously disappear after some fever, and, in his case, after
evere attack of diarrhœa. He said that the late Hon.
vard Everett, his cousin, had a large one. When a
th, they were both out in the field shooting, and when,
r a long chase for a fox, he became so fatigued in the
t, that his hydrocele became painful, and he had to lie
vn several hours, and he, J. C. Everett, had to adjust a
en pocket-handkerchief on to Edward so as to hold up
parts in order that he might walk home, some little dis-
ce. He was cured by Dr. Holbrook, of Milton, by the
ection of Port wine. He also knew of a number of his
er cousins who had been affected with hydrocele.

I have operated on two other cases similar to this, and with
ually good results. I know not whether this is anything
ginal or novel, although I have not seen a case reported
treated in a similar manner in any of my medical journals
text books.

If we examine the tissues comprising the scrotum and sur-
nding parts, we perceive that they are peculiarly con-
ucted. So loose are they that from a very slight injury or
y inflammatory process whatever, they will swell and
cken to an enormous size. Owing to this open, loose and
cular structure of the tissue, I reasoned, anything that
uld act like a seton, causing a continued suppuration,
uld reduce this thickened tissue, as blistering of the parts
ll often do. I have seen a very large case of elephantiasis
ickly yield after the insertion of a seton, or even by ex-
nsively blistering the parts, and the application of mercu-
l ointment, reduced by these means to a normal size in a
w weeks. It was this knowledge of the anatomical struc-
re and the pathological condition of this and similar affec-

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tions that these parts are liable to be attacked with, that induced me to fill the wound with silk to be left in to act in the manner I have described.

REMARKS.—These affections of varicocele, hydrocele and similar disorders of the scrotum generally appeal to us, not only from the great amount of physical suffering that they produce, but they have a most depressing effect morally, as we see in those college students, young men of the professions of all kinds and merchants constantly coming to us; and we find that by putting them off from time to time, they yield to this hypochondriasis more and more until in some cases insanity is the result. And how often these highly sensitive and intellectual patients we have spoken of are in the habit of terminating their own existence for this and similar affections, it is impossible to calculate; but that such is the case we know from reports in every community where young men of the most exemplary life have chosen to put an end to their existence rather than to endure this slight bodily ill, which is rising in mountain height to them in imagination. This dread is often intensified by reading advertisements in the daily press and circulars sent out by those soulless quacks to be found in every community who tell them of the fearful consequences, the loss of their manhood and impotency that is certain to follow any of these afflictions, which we all know, as practical men in our profession, seldom reach such severe results. So that it is wiser often for us to perform these operations which are comparatively slight and insignificant, and give but little suffering, rather than to have the dread to hang over any young man as a cloud and as a shadow for all future life. For, reason and advise as we will as to the simplicity of his afflictions, he sees only a permanent phase; he examines himself often; and the oftener he does, the larger his ills seem to grow, and the more of decided reality to him. And thus turning from our wise and good advice, he falls back upon those who have written just to attract his attention—knowing of this weakness peculiar to the young men—and he believes them rather than us. I have never seen anything but good results attending any of those operations I have recommended for

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drocele, varicocele and similar affections of these parts; d I would heartily recommend them after seeing for years e good results that have come from resorting to one or the ner of these simple operations. For at this period of a ung man's life, a kind word and a slight operation seem give him renewed courage; and such a course lifts him to a higher plain where he feels his independence and his manhood most fully developed and strengthened. e must always remember that it costs this young man to nsult us no little effort, and we should give to even what pears to us slight ills, our most serious consideration in r advice to him, for much will depend even on our direc- ons for his future good or ill.

Proceedings of Societies.

AMERICAN MEDICAL ASSOCIATION.*

SESSION HELD IN CLEVELAND, OHIO, JUNE 5–8, 1883.

GENERAL SESSION.

First Day—Tuesday, *June* 5th, 1883.—The Thirty-Fourth nual Session convened in Case Hall, at 10:30 A. M. Dr. C. Scott, of the Committee of Arrangements, called the eting to order. After prayer by Right Rev. Bishop Gil- ur, of Cleveland, the President, Dr. John L. Atlee, of ncaster, Pa., took the chair. General Ed. S. Meyer de- ered the formal address of welcome, which was well con- ved and eloquently delivered.

Ex-Presidents and Vice-Presidents were invited to seats on e stand. Dr. Scott made the usual announcements, adding at those who could not sign the Code of Ethics would not admitted as delegates to the Association.

Address of the President.—Dr. Atlee expressed deep regret the absence of delegates from the Medical Society of the ate of New York. "Let us hope their absence may be ly temporary, and that at the next meeting every State y be represented." He then stated as his subject *Some*

*This report is compiled chiefly from the daily papers of Cleveland—the rald, the *Leader*, and the *Plain Dealer*. The dailies of the more metro- itan cities have never equalled these papers in reports of the Proceedings of American Medical Association.

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Reminiscences of His Early Medical Life—which life began sixty-three years ago. When he began his medical studies in 1815, the University of Pennsylvania, the College of Physicians and Surgeons of New York, and the Colleges of Baltimore, Harvard, New Haven and Lexington, Ky., were the only institutions giving medical degrees. Dr. Wistar, Professor of Anatomy in the University of Pennsylvania, was the first author of an American text-book on Anatomy, but he died in 1818, just before the book was issued. Dr. Atlee recounted at length many of his recollections of Dorsey, Coxe, James, Horner, Chapman, Physick, Parrish, McClellan, Barton and others. Incidentally he remarked upon the value of the lancet. He thought it had been too much laid aside, but that it would again be restored to its legitimate use. He spoke of the good results of the adoption of the Code of Ethics and of the benefits it confers upon the younger members of the profession.

After a vote of thanks to Dr. Atlee for his address, and its reference to the Publishing Committee, the members of the Ohio State Medical Association—then in session in Cleveland—were invited to become members. After some announcements and other unimportant business, the meeting adjourned.

SECOND DAY—*June* 6th.—On motion by Dr. Foster Pratt, an amendment to the by-laws, proposed last year, was taken from the table, and Section 13 was so altered as to allow none but members in attendance to be eligible for the offices of President, Vice-Presidents, Secretary, Treasurer or Chairman or Secretaries of Sections.

Drs. S. D. Gross, Austin Flint and O. W. Holmes proposed an appropriation for the National Public Museum and Medical Library to preserve it from danger by fire. Dr. H. A. Johnson then offered resolutions asking Congress to make such provisions, which were adopted.

Dr. N. S. Davis then introduced a series of resolutions passed at the last meeting in favor of journalizing the Transactions. The trustees decided that it could be accomplished without involving the Association financially. Their idea was to publish a weekly at Chicago called the *Journal of the American Medical Association*, have an editor, who was to employ an assistant, and have a corps of correspondents in all the medical centres of the country, and a few of those in Europe; that no advertisements of patent medicine be admitted, and no professional cards, or other professional adver-

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isement, except under the strictest rulings of the Code of Ethics. He moved the adoption of a resolution to begin the ublication of a weekly journal, to be called the *Journal of he American Medical Association*, to take the place of the ublished Transactions of the Society hereafter. The reso- ution was adopted, although a slight effort was made to ostpone discussions for a day.

Dr. McMurtry, of Kentucky, announced, as Secretary of ie Board of Trustees, that Dr. N. S. Davis, of Chicago, ad been unanimously selected as editor-in-chief of the pe- odical. Dr. Davis said that, after much thought, he had onsented to accept the position. The Association had long eeded an organ of this kind. The first paper would proba- y appear by next July. Dr. William Lee has undertaken e department devoted to medicine. Dr. Atkinson offered s services to the new journal. Dr. Palmer, Dr. Cohen and few others spoke on the subject, a few desiring the con- nuation of the publication of the Transactions.

Dr. Davis resigned his position on the Journal Board of rustees, and J. H. Hollister, of Chicago, was elected to fill ie vacancy.

The Address in Medicine was delivered by Dr. J. H. Hollis- r. He discussed the value of the microscope in determin- g the truth of the germ theory of disease. He mentioned e difficulty of deciding which possessed the most vitality, e bacteria or the blood corpuscles, and the danger in pur- ing the germicidal treatment of killing the subject while the cteria remained unharmed, like the surgeon who saved the mor but killed the man. The doctor recommended that course of time a National Board of Medical Examiners e appointed, which alone should grant permission to prac- ce medicine, and that the yearly grists of the diploma-mills ould be stopped. Medical journalism claims comparison ith any previous year. Curious deformities are growing, owever. Journals bearing great names, but with meagre odies and beautiful wings, are inserting patent medicine ad- rtisements. The individual scale has risen greatly. The octor then referred to the diseases propagated by bacteria. rysipelas, leprosy and some fevers, it is becoming recognized, e transmitted by bacilli tuberculosis. Nothing to com- and special attention occurred in the department of ma- ria medica. In Italy a law has been passed prohibiting ie sale of patent medicines unless the exact composition is rinted upon each bottle. The Doctor closed with several uggestions of change to secure better medical culture. His emarks were several times interrupted by applause.

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Address in Obstetrics, etc.—Dr. J. K. Bartlett, not feeling able to read his report, got Dr. N. Senn to do so for him. The essayist recounted the many advances in obstetrical and gynæcological operations. He mentioned a process of destroying the fœtus by electricity in the occasional cases of extra-uterine pregnancy an anomaly, which can only result in the death of the mother unless an operation is performed. The transfusion of blood, milk and other solutions in the case of post-partum hæmorrhages, was discussed dispassionately and thoroughly. The too-frequent use of forceps was deprecated, and the conclusion arrived at that their use had been of far more injury than benefit to the suffering. The many mechanical contrivances for aiding child-birth were described in a slightly sarcastic manner.

Professor Toner, of Washington, Chairman of the Committee on Necrology, presented the report of the names of members of the Association who had died during the past year. The report was ordered to be published.

Adjourned until 9:30 o'clock to-morrow.

THIRD DAY—*June* 7th.—On motion by Dr. Keller, of Arkansas, the Constitution was so amended as to leave the time of Annual Sessions to the decision of the Nominating Committee instead of limiting the dates as now to the first Tuesday of May or of June.

A resolution, eulogistic of Dr. Wm. Farr, of London—author of the now almost universally adopted "Life Tables"—presented by Dr. Foster Pratt, was adopted.

Dr. D. H. Batcheller, of Rhode Island, moved that a committee of one or more from each State be appointed to petition their respective Legislatures to enact more stringent laws, governing the sale of toxical agents. Carried.

During the general discussion approving the motion, a member stated in substance that he strongly favored the resolution—that intemperance was a monster fiend stalking through the land, destroying morals, etc.; and called for organized opposition, etc. While in his grandiloquent flight of oratory, he was informed that *toxical* meant poisonous, and not alcoholic intoxication. The member finally saw the point and was persuaded to take his seat.

The motion of Dr. Walter Hay, to the effect that a Section on Psychological Diseases be established, was laid on the table until next year.

Atmospheric Conditions, and their Relation to the Prevalence of Diseases.—Dr. N. S. Davis, chairman of the committee

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n this subject, read a report, which went on to show the nportance of statistics secured from government sources on mospheric conditions. They were thus enabled to get very ir reports from several localities on the prevalence of en- mic diseases; and, from the data secured, were enabled to rm very shrewd speculations of why pneumonia, for in- nce, prevailed in one place in January of one year and in e following year in May, under exactly the same sanitary nditions. In other places they discovered why typhoid ver was four or five times as prevalent in one locality in 80 as 1881. He closed by asking that a vote of thanks extended by the Association to General Hazen for his ndness for giving all information asked.

Dr. S. D. Gross presented a resolution, which was adopted, commending the establishment, at every county town in r States and Territories, of schools or societies for the effi- ent training of nurses, male and female, by lectures and actical instruction to be given by competent medical men— embers, if possible, of county societies—either gratuitously at such reasonable rates as shall not debar the poor from ailing themselves of this benefit.

Dr. Reed, of Iowa, offered a resolution of condolence to e family of the late Dr. J. B. Hubbard, of Ashtabula, who ad died during the present session, which was immediately lopted.

The resolution introduced yesterday by Dr. Didama, for r. Tinsdale, of New York, relative to the appointment of ations of observation, which shall furnish data in regard the effect of the atmosphere in certain localities with ref- rence to pulmonary diseases, was referred to the Committee n climate, together with Dr. N. S. Davis' report.

On motion, Dr. Didama was added to the committee.

Proposed Revision of Code of Ethics.—A communication as read by Dr. S. Pollak, of St. Louis, from the St. Louis Medical Society, in which it was stated that an association an only be ruled by laws made by itself. Good laws, under ome conditions of circumstances, become oppressive under thers. In the past thirty-four years so many changes have ccurred, the Code has accomplished all it was designed it hould, but at present many of its features are obsolete, and ot adapted to their want. The necessity of an early revi- ion is very apparent, is loudly called for in all parts of the ountry, and it cannot be repressed much longer. The American Medical Association can alone order the revision. State societies can only ask for such revision. The excite-

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ment and evil consequences of a schism can be easily averted now and fraternal feeling restored. The paper, therefore, asked that a committee consisting of one member from each State be appointed to take into consideration the advisability of revision, and report thereon at the session in 1884, and that the committee be empowered to report a new Code of Ethics. When the resolution was read, a motion to table it was immediately made, and, being put to the house, was carried by a considerable majority. About three-fourths of those present seemed to oppose a revision.

The President announced the names of those appointed as delegates to foreign societies, which are as follows: Drs. G. J. Engleman, of St. Louis; W. M. Finley, of Altoona, Pa.; Walter L. Zeigler, of Lancaster county, Pa.; M. H. Alter, of Armstrong county, Pa.; R. B. Cole, of San Francisco; Joseph H. Warren, of Boston; C. H. Von Klein, of Hamilton, O.; W. M. Lawlor, of San Francisco; Henry Martin, of Boston; J. C. Hutchinson, of Brooklyn; A. M. Hawes, of Detroit; Edward Borck, of St. Louis; T. F. Prewitt, of St. Louis; E. P. Allen, of Pennsylvania; H. McCall, of Michigan; J. N. Quimby, of New Jersey, and S. C. Gordon, of Maine.

Address in Surgery and Anatomy.—Dr. N. F. Peck, of Davenport, Ia., contrasted the present methods of surgical operations with those of the past, and the speaker remarked upon the improvements in surgical instruments, particularly the ratchet splint. The use of the electric light in observations of the cavities of the human body, and the many valuable facts thereby obtained, were rehearsed. He laid special stress upon the necessity of careful attention to details, upon which success in surgery so largely depends. Graham Bell's induction balance was mentioned as a valuable instrument in certain methods of diagnosis. Sir Henry Thompson's opinions on urethral surgery were quoted approvingly. The removal of polyps, whose locations were discovered by means of the electric light, was described in detail. The speaker related the many valuable improvements in the surgery of the abdomen within the past few years. Cases were detailed with observations on the overlooked frequency of pathological conditions in the ilio-cœcal region. He gave the history of a case in detail in which explorations were made in the abdomen by incision and an obstruction of the bowels resulting from a singular abnormal position of the vermiform appendix, which would have eventuated in death, remedied by an operation eminently successful. He dilated upon the

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portance of boldly opening the abdomen in such cases ore the situation of the patient becomes critical.

ddress on State Medicine.—Dr. Foster Pratt, of Michigan, d he was placed in a rather embarrassing position, as dis- eries which exercised influences on sanitary knowledge re made in other departments, and he could not even in- ge in the luxury of theory. Twenty-seven States have, ctically, declared that health is wealth, but eleven still d out. In Michigan, they have 1,400 local sanitary boards, ides a State board to act on such questions as the local rds cannot grapple with. The people are emancipating mselves from the thraldom which held them powerless in great epidemics of the past. They now no longer re- d them as the visitations of God's wrath, and have come know that the curse causeless does not come. The march improvement still goes on, in spite of the opposition of iticians, who find in the plans of sanitary committees ther place nor plunder; in capitalists, who object on ac- nt of the food frauds in which they are interested, and ich they fear may be overthrown; and the superstitious ad of interference with the Divine plans. The value of work of such measures is shown in the fact that small- , which has stood at the head of contagious diseases in nt of communicability, now stands at the head of those st easily prevented. The speaker mentioned the suspicion ich rested (see Congressional reports) upon the movers of itary reform as being men who sought to win sustenance n the State, and salary-grabbers. He described the oper- n of State sanitary work in his own State as a specimen what might be done at a comparatively low expense. tistics show that in seven years after the introduction of itary measures in England, the average length of life in es has been increased two full years; while in females, o suffer far more from bad sanitary arrangements, the in- ase has been full three and a half years. The improve- nt has been so marked in this short time, that insurance panies have considered the advisability of regarding the gress of State sanitation as an important factor in the putation of vital statistics.

The treasurer, Dr. Richard J. Dunglison, reported a bal- e of $903.96 in the treasury. The librarian reported 115 itions to the library, making a total number of 5,713 vol- es now in the possession of the Association. The Com- tee on publication reported that an index to the twenty- ee volumes of Transactions was in course of preparation

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by the permanent secretary, and that 1,500 volumes of the Transactions had been published. The index will cost $1. The report was adopted.

Dr. Eugene Grissom, of Raleigh, N. C., presented the report of the Committee on Nominations, which was adopted. The following are the officers-elect:

Dr. Austin Flint, Sr., New York city, *President:* Drs. R. A. Kinloch, Charleston, S. C., T. B. Lester, Missouri, A. L. Gihon, U. S. Navy, and S. C. Gordon, of Maine, *Vice-Presidents;* Dr. Richard J. Dunglison, Philadelphia, *Treasurer;* Dr. C. H. A. Kleinschmidt, Washington, D. C., *Librarian;* Dr. A. Y. P. Garnett, of Washington, D. C., *Chairman Committee of Arrangements.*

The following are the officers of Sections:

Practice of Medicine—Chairman, Dr. J. V. Shoemaker, Philadelphia; Secretary, Dr. W. C. Wile, of Connecticut.

Obstetrics and Diseases of Women—Dr. T. A. Reamy, Cincinnati, Chairman; Dr. J. T. Jelks, Arkansas, Secretary.

Surgery and Anatomy—Dr. C. D. Parks, of Illinois, Chairman; Dr. H. O. Walker, of Michigan, Secretary.

Ophthalmology, Otology and Laryngology—Dr. J. J. Chisolm, Baltimore, Chairman: Dr. Thompson, of Indiana, Secretary.

Diseases of Children—Dr. William Lee, of Maryland, Chairman; Dr. W. R. Tipton, of New Mexico, Secretary.

Oral and Dental Surgery—Dr. T. W. Brophy, of Illinois, Chairman; Dr. John S. Marshall, of Illinois, Secretary.

State Medicine—Dr. D. J. Roberts, of Tennessee, Chairman; Dr. Tranzoni, of Washington, D. C., Secretary.

Committee on Necrology—Dr. J. M. Toner, Washington, D. C., Chairman.

The additions to the Judicial Council to fill vacancies are Drs. F. D. Cunningham, of Virginia, H. O. Marcy, of Massachusetts, W. O. Baldwin, of Alabama, J. S. Billings, of the United States Army, Truman W. Miller, United States Marine Hospital surgeon, Eugene Grissom, of North Carolina, and R. M. Todd, of Indiana; to fill a vacancy for the class of 1884, R. M. Todd, of Iowa.

Washington, D. C., was selected as the place of next annual session.

Dr. A. L. Gihon stated that he had been misunderstood in his address before the Section on State Medicine. He was an adherent to the Code of Ethics of this Association.

After some announcements, the meeting adjourned till tomorrow morning.

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FOURTH DAY—JUNE 8*th*.—The following were appointed committee on surgical *service aboard steamers* and other ocean vessels: Dr. A. N. Bell, of New York; Dr. A. L. Gihon, United States Navy; Dr. J. N. Quimby, New Jersey; Dr. H. O. Marcy, of Massachusetts; and Dr. Henry . Smith, of Pennsylvania.

Dr. Keller presented the following: That in the very near ture, if not now, *cremation will become a sanitary necessity* the large cities and populous districts of the country, and at the question be referred to the Section on Hygiene, hich was done.

On presentation by Dr. Brodie, it was resolved that the sociation profoundly regrets the death of Surgeon-Gene- Barnes, and that it recognizes the energy and ability of services in connection with the Army Medical Museum d Library, and the Medical and Surgical History of the ar.

The Judicial Council, through its chairman, Dr. N. S. vis, in regard to a rehearing in the case of Dr. D. N. Day, hich was adjudicated last year, ordered the return of the ition to Dr Day, with the leave granted to supplement paper by a written statement of the character of the new dence which he proposes to introduce, and the Council clined to act upon the case until the opening of the session next year, from the impossibility to notify all the parties ncerned.

In the case of Dr. D. N. Goodwillie, of New York, the uncil decided that the registration of the Doctor be can- led, and his annual dues be returned to him. Dr. Good- llie was chairman of the Section on Oral and Dental Sur- ry, and as such should have read his annual report before e Association, but this he was not permitted to do. When r. Goodwillie paid his annual dues he signed the Code un- r protest, and although he presided at the sessions of his ction the matter was brought before the Judicial Council ith the result of debarring him from reading his annual port. The Council were determined to prevent all discus- on on the Code, and their displeasure was thus vented on r. Goodwillie. The report of the Council was adopted.

Dr. Bell, of Brooklyn, offered a resolution that all papers reafter be presented to the trustees for assignment to the oper sections.

Dr. Foster Pratt spoke in favor of the motion, on the ound that several papers which should have been referred the Section of State Medicine went to other sections.

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Dr. Toner desired an amendment so as to refer the paper to the Committee on Arrangements instead.

Dr. Pratt did not think the amendment a judicious one, but stated that many papers had been presented and read which should never have seen daylight at all.

Dr. J. Solis Cohen opposed the resolution. Some years ago he prepared an elaborate paper which he sent to the committee and they lost it. A motion was finally made to table the resolution, which was carried.

The amendment of Dr. Sears, of Arkansas, looking toward the addition of workers to the several sections, at the discretion of the chairman and secretary of the section, was tabled for one year.

Dr. J. W. Smith, of Iowa, introduced an amendment affecting the right of permanent members to vote, which called forth considerable excitement from the members on the question.

Dr. N. S. Davis spoke vehemently against it with such effect that after a confused debate the amendment was indefinitely postponed.

Dr. Turnbull, of Philadelphia, read a brief paper on what might be called pitch-deafness, prefacing a resolution to the effect that legislatures be requested to take some steps toward having engineers examined in regard to their hearing. The resolution was referred to the Section on Otology.

Dr. R. F. Blount requested that his address on Diseases of Children be referred to the Publishing Committee without being read. Granted.

Dr. Eve, of Nashville, Tenn., exhibited a leather appliance for keeping the arm stationary after extension.

The Secretary, Dr. Atkinson, declined to receive this year the honorarium usually voted him, as he wished the entire sum devoted to the interests of the journal to be established.

After many votes of thanks to the profession, citizens, newspapers, etc., of Cleveland, to the President and other officers of the Association, etc., Dr. Atlee very gracefully resigned the chair to Vice-President elect, Dr. Lestor, in the absence of Dr. Flint.

Dr. Lestor, after returning thanks, and there being no further business, announced the session adjourned to meet in Washington, D. C., on the first Tuesday in May, 1884.

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PROCEEDINGS OF SECTIONS.

ACTICE OF MEDICINE, MATERIA MEDICA AND PHYSIOLOGY.

IRST DAY—*June 5th.*—Chairman, Dr. J. H. Hollister, of cago; Secretary, Dr. J. G. Lee, of Philadelphia.

llow Fever was the title of a paper by Dr. Robert D. rray, of U. S. Marine Hospital Service, read, in his ab- e, by Dr. Thurman Miller, of Chicago. The author ially urged that the patient should go to bed as soon as earliest symptom occurs, and let him have warm foot s and absolute and constant quiet of both mind and y. Light diet should be allowed; and as convalescence in, give tonics. To stop the vomiting, give charcoal early, pieces of ice may be allowed to melt in the mouth. If morrhage should occur in the stomach and is not vomited, ove the blood by gentle purgatives. The symptoms ld each be met as they arise by the usual remedies, but ys exercise the utmost caution to prevent or relieve ea.

r. Henry F. Campbell, of Augusta, Ga., said that bleed- of plethoric patients was frequently attended with good lts. In the case of a husband and a wife with the dis- the woman vomited blood and recovered; the husband d not vomit, and a pint of blood was taken from his but it was not enough to save him. Vomiting should ncouraged by hot-water drinks—a dozen glasses, if nec- y.

r. Elliott, of Pennsylvania, does not approve of bleed- but thinks patients should be put to bed immediately ppearance of the disease.

r. A. N. Bell, of Brooklyn, approved of the plan of ment suggested in the paper.

r. Fraulyn, of Ohio, thinks depletion by calomel better by venesection.

n. Ellwell, of Cleveland, wished to know more about auses of yellow fever.

r. J. B. Hamilton, Surgeon-General U. S. Marine Hos- Service, urged that the strictest system of quarantine tablished upon the outbreak of the disease, to prevent preading.

k Sickness was the subject of a paper by Dr. W. M. h, of Ohio, which was discussed in part by Dr. A. B.

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Palmer, of Ann Arbor, Mich., who thought the germs of the disease multiplied after entering the body.

SECOND DAY—*June 6th.*—**Alimentary Canal in Bronchitis and Phthisis.**—Dr. Thomas N. Reynolds, of Detroit, Mich., said that the abnormal condition of the alimentary canal and portal and lacteal systems, was often the predisposing cause of both acute and chronic affections in all parts of the respiratory apparatus. Speaking only of bronchitis and phthisis, acute tracheo-bronchitis was often caused by excess in the dietary with proportionately incomplete waste elimination. In such cases, the treatment should be prompt evacuation of the bowels and restriction of the diet to a light liquid form. Necessary quiet and warmth of the surface should be maintained, but the atmosphere of the room should not be too warm. The cathartic, hot drinks and a warm surface produces a revulsion of nervous energy from the inflamed part to the bowels, kidneys and skin. He deprecated the use of ordinary cough mixtures to the exclusion of this more rational treatment. Morphine, quinine, aconite and veratrum viride were the more usually appropriate remedies in the first stage, but did not equal the treatment without drugs to which he referred.

Derangement of the primæ and secundæ was still more causative of chronic bronchitis, and treatment should have reference to this fact. When purulent, quinine was the best remedy in connection with the management pertaining to ingestion and elimination. It was not wise to press stimulants and strong nourishment when not readily digested. Clothing should be sufficient, but not excessive; a common mistake was, wearing too much on the chest. He has a few times seen striking improvement in expectoration in those going about from removing two or three extra undershirts and a chamois-leather lung protector. Physical exercise, involving free use of the lungs, restored wonderfully their normal elasticity after an attack. It dissipated thickening and adhesions, just as continued free motion dissipated the thickening and adhesions from around a recently inflamed joint. Catarrhal and fibroid phthisis most frequently were the result of neglected chronic bronchitis, and should be treated in much the same way—not by cod-liver oil or any other supposed specific alone, especially if they interfered with digestion; but quinine was useful in lowering temperature and lessening the secretion of pus; and the patient should cultivate an out-door life, with plenty of physical ex-

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rcise and wholesome mental occupation. Under this regime igestion and tissue building soon went on properly; cavities ften healed and recovery became complete. Any region ree from malaria or unwholesome emanations, with a temerature permitting constant out-door life, would answer for resort. Tubercular phthisis had sometimes seemed to be xcited in those of tubercular family history by neglected ronchitis in those of constipated habit and general defective imination, and who lived an inactive indoor life. In dyspsia with constipation and septic fermentation of the insta, it seemed probable that the septic products might be rried by the portal and lacteal vessels direct to the capilies of the lungs, and be there sometimes auxiliary in sing bronchitis and phthisis in any or all of their forms.

Dr. W. F. Belfield, of Chicago, read a paper on *Germ heory of Disease*, which he illustrated by micro-photographs.

Mechanical Remedies in the Treatment of Skin Diseases.—Dr. John V. Shoemaker, of Philadelphia, said there are a number of remedies used in the treatment of skin diseases which, being mechanical in their application, may be termed mechanical remedies. They are massage, compression, bloodetting, incision, excision, enucleation, scooping, scraping, etons and cauterization—measures which have been in vogue almost from time immemorial.

Massage, in certain morbid conditions of the integument, hen properly applied, is often followed with marked beneicial change, and, at times, with complete restoration of the art to its natural state. It not only acts locally, but by its direct effect, when used generally, will add tone and vigor o the entire system. This direct as well as indirect action f this powerful mechanical remedy can be put into execuon both for its local and constitutional effect in many skin ffections. Massage, in its original sense, simply implies neading; it has now a wider and more general use, and inudes as well a group of procedures known as friction, pinchng, manipulation, rolling and percussion of the different xternal parts of the body. It can be done with the hand r with the additional aid of some fatty substance, a coarse owel, a hair mitten or brush. It may be performed also by neans of ingenious machines that are now arranged for oing what the most skillful manipulator can do with his ands. The first and most common form of massage used n the treatment of skin diseases, is friction. Friction can e employed upon the integument, either by patients themelves or by a manipulator with the hands, and with the aid

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of some fatty material, liniment, brush, or a coarse towel, or mitten, according to the special indication in each case. In the dry form of seborrhœa, particularly of the scalp, and in thinning and loss of hair, frictional massage, used with moderation, stimulates the sluggish circulation, furthers absorption, and imparts tone and vigor to the scalp and hair. In indurated acne and in glandular swellings, it arouses the activity of the sluggish and choked-up absorbent vessels, and thus relieves the glandular congestion, and the skin again becomes normal; likewise it often removes, or assists in removing, when used over the trunk, many gastric and intestinal disorders which very often keep up the cutaneous irritation. This general effect of frictional massage, he had witnessed again and again in relieving and curing constipation and other functional derangements, which are very often active factors in keeping up acne, rosacea, hyperidrosis, seborrhœa, urticaria and eczema. It is often efficacious in removing scars, and in cases in which the pigment of the skin is either in excess or deficient in quantity, stimulating to renewed activity of the absorbents, and assisting in again restoring the parts to their natural state. Massage is an invaluable agent in certain neuroses, especially in neuralgia, perverted sensibility, and trophic disturbances of the skin. It exerts in these affections a delightful and pleasing local effect, relieves pain by its sedative and counter-irritant effect, increases the circulation of the blood in the integument, thus lessening its activity in the internal organs, and likewise has as a result a decided tonic action upon the nervous system. Massage as a general remedy is an important and valuable adjuvant in promoting and increasing oxidation in cases of scrofuloderma and in psoriasis. It makes the skin more active, removes effete products from within as well as without, and increases the red corpuscles of the blood. It is a most useful remedy both for its general and local effect in many of the forms of sub-acute and chronic eczema.

Compression should receive more attention in the local treatment of skin diseases, than is given to it at the present time. It can be applied by means of any substance which will afford rest and support to the affected structures. The means usually employed are muslin, linen, cotton, silk and gum, used either alone and bound upon the parts, or arranged in the form of bandages, plasters, or the several materials combined together and woven to the shape of the part to which it is to be applied. Ordinary muslin lightly bound over the surface of many eruptive affections, will not only

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ve rest and support to the parts, but will also exclude them om the air, which often tends to keep up the active irritaon. Compression may be applied in the local treatment of ysipelas, and to soothe and protect denuded surfaces of ose recovering from eruptive fevers. It is a most important djuvant in the treatment of herpes, herpes zoster, urticaria, runcular and glandular affections, erythema and eczema. acute eczema, it soothes muscular irritation, tones up the lated capillaries, and prevents the escape of serosity into e tissues. In subacute and chronic eczema, it will enable e vessels to remove poured-out products, protect the denud surface, and exclude the air, which is very stimulating to lamed and irritable parts, and so moderate diseased action. e here showed a new woven gum bandage which he has en using in place of ordinary gum bandages, and spoke of great advantage for making systematic compression in zema and other skin affections. In chronic eczema of ner the superior or inferior extremity, the use of water or dressings and local medication, combined with systematic ssure with the bandage, will generally afford excellent ılts.

The abstraction of blood, either as a local or general mea-e, is a most powerful antiphlogistic remedy in the treatnt of skin diseases. It is both a speedy and an efficient ans of combating and arresting morbid changes of the guments. It is especially applicable, topically, in chronic ditions after medicinal agents have been exhausted in attempts to cure many eruptive diseases. Blood may abstracted, either locally from the capillaries or generally n a vein or an artery. In the treatment of cutaneous ctions by means of blood-letting, local depletion should used in the great majority of cases—general blood-letting y being resorted to in very rare instances. Topical blooding may be performed by puncturing, scarification and ching.

The Doctor exhibited his new dermatome, and other apances. He spoke also of the great value of such mechanl means as incision, excision, enucleation, scooping, scrapg, seton, and cauterization in the treatment of many skin eases.

Dr. L. B. Tuckerman, of Cleveland, made some remarks a *New Method of Procuring Pure Pancreatic Juice.* He strated his method by means of a coach dog in whose tulous stomach he had fastened a canula about two months o.

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THIRD DAY—*June 7th.*—**Elements of Prognosis and Therapeutics of Laryngeal Tuberculosis.**—Dr. J. Solis Cohen, of Philadelphia, while acknowledging that the prognosis is always bad in tuberculosis of the larynx, maintained that it is less unfavorable in certain cases than others. After citing several cases, he discussed a number of acute varieties occurring in his own practice, closing with: "I have reason to believe that the course of certain forms of tuberculosis of the larynx may be retarded to such an extent, in occasional instances, as to start the patient on the road to recovery." Practical illustrations followed.

Vaccination and Propagation of Vaccine Virus.—Dr. Henry A. Martin, of Boston, recommended young heifers for physicians to procure vaccine virus from, not because they are cheaper, but for the reason of their perfect health. In the vaccination of the animals the skill of a physician is required. The quantity of virus that can be taken from an animal varies very much. It can be vaccinated only once upon each puncture. He introduced animal vaccination in this country, and would consequently like to see it successful. He did not speak against the use of vaccine from the arm of a patient, but said, owing to the enormous demand, it was utterly impossible to procure the desired quantity, and was a great temptation for dishonesty.

Dr. A. T. Kyte, of Ohio, then read the closing paper on *The Diminution of the Retardation of the Pulse in Aortic Insufficiency;* at the conclusion of which, it was referred to the Committee on Publication.

SURGERY AND ANATOMY.

FIRST DAY—*June 5th.*—Chairman, Dr. W. F. Peck, of Davenport, Iowa; Secretary, Dr. Paul F. Eve, of Nashville, Tenn. A number of ladies were present.

Radical Cure of Hernia.—Dr. R. B. Vance, of Cleveland, O., read a lengthy paper on this subject—his references being to oblique inguinal hernia. He had performed the operation nineteen times, and always with satisfactory results. The peculiarity of his treatment is that he revivifies and brings together the two lips of the hernia, by means of a deep-seated suture passed sub-cutaneously with a semi-circular needle. By this means the previously wide-opened hernial canal becomes a closed valve, that resists all tendency to reprotrusion. The Doctor claimed that the method relieved patients from all chance of strangulation of the hernia.

Comparison of Antiseptic and Non-Antiseptic Methods of

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reatment.—Dr. Dudley P. Allen, of Cleveland, O., said that ithout doubt there is less of the antiseptic method in this ountry than there was a few years ago. The views of Dr. eith, of Edinburgh, were freely quoted in reference to the isuse of the spray in cases of wounds in the abdominal cav-y, for fear of nephritis. The danger from the germs in the tmosphere was considered less than from the use of the an-septic in this kind of wounds or operations. The different ethods of operation of Volkmann, Halle, of Saxony, and illroth, were described in full. The three systems were resented in the following order: First, that of Lister, which revents the germs from entering the wound; second, that f Volkmann, which prevents the germs from causing septic tion by washing out the wound; third, that of Billroth, hich disregards the entrance of germs to the wound and estroys their evil effects by the use of a powder which ren-ers the wound antiseptic. He concluded with the follow-g as a summary:

(1.) The fact that the operations on the abdominal cavity ucceed without the spray does not influence the employ-ent of antiseptics with regard to other operations where here is a continued opportunity for infection.

(2.) The spray is the least important of all the details in ntiseptics, and if the other details are attended to, the proper ressing of wounds, pressure, and drainage may, by securing bsolute quiet for a wound, turn danger into benefits.

(3.) Different methods are of different application; and hereas the spray might be most desirable in opening joints nd in the atmosphere of hospitals with hygienic surround-gs, flooding might be equally efficient in certain other ounds, and some prominent antiseptic, as iodoform, would e most serviceable, when other antiseptics are inapplicable, s in the removal of the tongue.

(4.) Although there are certain dangers in the use of anti-ptics, these are more than equaled by the dangers attendant pon their omission, especially in large hospitals; and dan-ers of poisoning are certainly decreasing as the application f antiseptics is becoming better understood. Investigation ay develop a method of securing antiseptic results less nerous and devoid of the disadvantages that now surround em. He expressed the belief that the various antiseptic ethods secured far better results than any other method.

Dr. Mortimer, of Massachusetts, said that Listerism would oon be a thing of the past, which was hotly denied by Dr. ancrede, of Philadelphia.

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Value of Early and Late Operations in Morbid Growths, especially Malignant.—Dr. Samuel D. Gross, of Philadelphia, Pa., said the great reasons for the removal of tumors in the early stages of their development, are: (1) Less risk of shock and (2) of hæmorrhage; (3) The more effectual riddance of the diseased structures; the diminished probability of septicæmia or blood-poisoning; (4) The avoidance of unsightly scars; and (5) The less risk of a recurrence of the morbid action, either at the seat of the operation or in other parts of the body. All morbid growths or tumors, whether benign or malignant, are of local origin. That the constitution in certain conditions, as when from any cause the general health is more or less seriously impaired, may predispose to such formations, is not improbable; but that a neoplasm can be developed in any organ or structure of the body of a perfectly sound person, without some local cause, is what no enlightened pathologist of the present day believes. There is occasionally a hereditary tendency to the development of morbid growths. We see this tendency, sometimes in a remarkable degree, displayed in warts and sebaceous cysts. Examples of the latter I have repeatedly witnessed in three generations, and instances doubtless occur in which this disposition manifests itself still further. Malignant diseases, as carcinoma and certain forms of sarcoma, occasionally betray a similar tendency. As many as three, four, or even five cases of scirrhus of the mammary gland have been noticed in as many different members of the same family. Epithelioma of the lip, skin, vagina, and uterus occasionally exhibits a similar freak.

All morbid growths, tumors or neoplasms are the product of perverted nutrition, in which the comparatively few cells native to the part are replaced by colonies of young cells, of the latter of which the new product is essentially composed. All morbid growths are developed, directly or indirectly, under the influence of inflammatory action, the result of external injury, or, as is more frequently the case, of some mechanical obstruction, causing, first, congestion of the part, and this, in turn, incited action and inflammation—both leading sooner or later to abnormal cell-growth, cell-formation, or cell-development. It is in this way alone that we can satisfactorily explain those morbid growths, both benign and malignant, which, as the phrase goes, arise without any assignable cause. One of the most simple of all tumors, the sebaceous, is formed under the irritating influence of its own natural secretion, retained by the closure of its natural out-

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et. Obstruction of a lacteal duct is a frequent starting point of scirrhus of the mammary gland. There is not a surgeon of any experience anywhere who has not occasionally met with cases of carcinoma which were due, directly or indirectly, to the effects of local injury.

Having laid down these fundamental principles, we can now take up the question of the importance of early surgical interference in morbid growths, more especially *malignant neoplasms*. There are some tumors whose distinguishing features are so well marked, even in their earlier stages, that he who runs may read. On the other hand, great difficulty often presents itself. When the tumor is fully developed, when its features stand out, as it were, in full relief, there can rarely be any doubt about its true nature—certainly in the mind of an educated surgeon. Unfortunately, few cases of malignant disease come under our observation in time for early surgical interference. In the great majority of instances the mischief, in the form of great structural lesion, if not serious constitutional involvement, is effected before the enlightened practitioner has an opportunity of injecting the morbid product. Three circumstances may be enumerated as contributing mainly to this result: the want of correct diagnosis, the dishonesty or knavery of the professional attendant, and the folly or stupidity of the patient. Diagnosis is a high art, and the profession, as a body, are not sufficiently familiar with it to render it at all times, or even in a minority of cases, properly available at the bedside. Founded essentially upon a thorough knowledge of pathological anatomy—a branch of science little cultivated in any of our schools, and totally neglected in most—it is not surprising that the art should be so little understood by the generality of practitioners, and so many errors committed in the examination of morbid growths. "If there is any one thing in the organization of our medical colleges more culpable, I had almost said more criminal, than any other, it is the exclusion from their curriculums of the study of pathological anatomy." Just in proportion as our knowledge of morbid structure is positive, accurate and comprehensive will be the probability that we shall become skilled diagnosticians, and conversely. Hence, so long as this state of things exists, we shall look in vain for any marked improvement in this direction; and what is true in this respect is true alike of city and country practitioners, standing, as they do, upon the same unfortunate platform.

As an illustration of my meaning, carcinoma of the female

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breast generally begins in the substance of the mamma as a small nodule or tumor, hard on pressure, and the seat of occasional pain of a shooting or darting nature. The woman is forty-five years of age. As the morbid action advances, the growth enlarges, the pain increases in severity and constancy, and, by and by, retraction of the nipple is noticed. Gradually the growth becomes more and more fixed in its situation, and if now the glands in the axilla—naturally so diminutive as to be scarcely distinguishable—be examined, they will be found more or less enlarged and indurated. The diagnosis is not difficult. The case is one of scirrhus—nothing else. A careful examination of the breast, and a careful consideration of the history of the case, leave no doubt as to its true character. If the patient is under forty years of age, or from twenty-five to forty, with a hard, movable nodule, the seat of occasional darting pain, especially annoying during the menstrual period, unaccompanied by change in the nipple, in the surface of the breast, and in the axillary glands, we assume that the neoplasm is a fibroma or adenoma, and assure the patient that excision of the growth will eventuate in a complete cure.

In carcinoma of the breast, the honest surgeon does not wait for involvement of the axillary glands or serious structural disease. The patient's safety lies in early and thorough excision. If the operation be properly done, it will probably eventuate in a permanent cure, or, if relapse occurs, there will be a comparatively long exemption from suffering. Everybody knows what the result of excision of the mammary gland in ordinary cases of cancer is; how rarely the disease is completely removed, and how few women live beyond eight, ten, or twelve months after such interference. In all such cases cancer cells have invaded the neighboring structures beyond the reach of the knife, especially as ordinarily employed, and serve as foci of new neoplasms.

What has been said is true alike of carcinoma, or sarcoma, and even of benign growths. In carcinoma, the cells are conveyed from the original disease by the lymphatic vessels, and in sarcoma by the blood-vessels, whereas in the ordinary tumor the increase is due simply to cell-proliferation, which often proceeds with extraordinary rapidity, the growth in a short time acquiring an enormous bulk.

In all operations for the removal of neoplasms of whatever nature, the golden rule is to perform the work as thoroughly as possible. If this cannot be done, it is better in many cases, if indeed not in all, not to meddle with the growth at

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, as such interference often only tends to light up increased tivity, not only in the abnormal structures themselves, but tne surrounding ones. In carcinoma, the knife cannot be nployed too early. All secondary developments, as en-rged and indurated lymphatic glands, should, of course, be moved in immediate succession. All sarcomatous neo-asms are, as a rule, dangerous formations, however early bjected to the knife, not so much on account of any inhe-nt tendency to recurrence after extirpation, as from their bility to attack other parts of the body from causes similar those which gave rise to the primary disease. The worst all sarcomas is the round-celled. Any rapidly growing mor is, as a law, a bad subject for successful surgical inter-rence.

All benign growths of rapid development cannot be extir-ted too soon. Let us, for example, take a cystic tumor of e ovary. No one will deny that a neoplasm of this kind of nall bulk can be removed more easily and with less risk to fe than a large one, or one of long standing. In the former se there will probably be no adhesions, and little or no nger of hæmorrhage or shock; a comparatively small in-sion will be required to expose the mass, and the resulting eritonitis will be restricted within the healthy limits, the nits of repair. In ovarian cysts of large size, the reverse f all this is usually the case; there is also apt to be greater nock and greater liability to blood-poisoning. Similar re-arks are applicable to chondromas, fibromas, and osteomas; perated upon early in their progress, their removal is gene-lly easily effected with little or no risk to life; allowed to main until they have attained a large bulk, the trouble nd dangers of operative interference are augmented a hun-red fold. Nothing more happily illustrates the truth of the ld adage, "A stitch in time saves nine," than early opera-ons for the cure of such growths.

What should be the rule of action in cases, for instance, f carcinoma of the breast, in which, perhaps, several opera-ons have already been performed? There is a large ulcer-ted surface, attended with excessive pain and a large quan-ity of the foulest discharge, poisoning the very atmosphere hich the sufferer is obliged every moment to inhale? weep away the whole mass of disease, so far as it is accessi-le to the knife, and then treat the wound and the system pon general principles. Such a procedure is the only easible one of relieving pain, of moderating suppuration, nd of making the patient temporarily comparatively com-

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fortable. Death under such circumstances is generally hailed as a welcome visitor. In malignant disease of an extremity, attended by such a state of things, the proper remedy would, of course, be amputation without any ulterior hope of a cure. In the throat, portions of the sprouting mass may be clipped off with the scissors, and in the nose and the vagina, scraped away with special instruments. When all hope is at an end, the only thing to be done is to impart a silver lining to the remnant of life by means of anodynes, administered in quantities sufficient to relieve pain and promote sleep.

What is here said respecting early surgical interference in morbid growths applies with equal force to many other surgical affections, as well as to diseases in general. Thus an abscess, if not opened early and freely, is sure to cause serious destruction of tissue, to say nothing of the concomitant pain and other distress. A small stone is more easily crushed or extracted than a large one, while the risk to life is incomparably less, inasmuch as there is less danger from shock and hæmorrahge, laceration of structure, urinary infiltration, pelvic cellulitis, peritonitis, pyæmia or uræmic poisoning. Besides, the longer a stone remains in the bladder and the more it increases in size, the greater will be the chance of its causing serious disease of the bladder and of its dependencies. A pneumonia in its incipiency is, in general, easily managed. Rest in bed, abstinence from food and excitement, and an anodyne diaphoretic, with a turpentine stupe or a dozen dry cups to the chest, usually suffice to cut short the attack in a few hours, or, at most, in a few days. Allowed to progress, it becomes one of the most formidable maladies with which the physician has to cope, and forms one of the great sources of mortality, especially of advanced life.

Treatment of Synovial Diseases by a New Method.—Dr. Henry A. Martin, of Boston, in this paper advocates the drawing off of the synovial fluid by aspiration, and the application of the rubber bandage. The figure 8 turn is to be followed in treating the leg, and the spiral bandage on the arm.

SECOND DAY—*June 6th.*—*Surgical Uses of Electrolysis* was the title of a paper by Dr. Robert Newman, of New York. He illustrated its curative application in the treatment of urethral stricture. He has simplified the apparatus by the addition of a battery.

Treatment of Fractures of the Long Bones.—Dr. James E. Taylor's (of New York city) paper on this subject was pro-

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fusely illustrated by a large number of well executed engravings. He treats fracture of the thigh bone with a saddle made to fit to the perineum, whereby he secures the most perfect comfort possible by any apparatus used for the purpose of counter-extension. This little saddle is held in position by a strap, running to the headboard on each side, thus securing the patient in an immovable position. By fastening strips of adhesive plaster, previously secured to the leg, to a screw arrangement in the foot of the bed, he can produce any desired degree of extension of the limbs by simply turning the little screw at the foot of the bed; the chief advantage of the whole apparatus over all other instruments being the little saddle on which the patient sits, as it were, with comfort, he claims, rather than misery, as in most other methods. He opposes the old method of using suspensory weights to produce extension of the limbs.

As to the treatment of fractured ribs, he brings the broken ends into place by raising the arms over the head, an original method by which there is no trouble in adjustment. They are then held in place by a band of adhesive plaster around the body. He gave original methods of treating broken wrists and collar bones, illustrating the treatment of the latter with a living example, in the person of an Irish laborer of this city, who was suffering from an injury of the kind named, and who bore unflinchingly the trying ordeal for three-quarters of an hour. The method is a modification of other methods by which is secured perfect immobility of the shoulder blade, thereby enabling the operator to secure the broken ends in position till healed, avoiding any deformity. The method also allows free circulation of the blood in the arm, which is by many other methods often very hard to secure. He contended strongly for simplicity and readiness in the performance of surgical operations, and frequently cited Hippocrates in support of his opinions.

Dr. Henry O. Marcy, of Boston, detailed the results of a series of experiments he had made as to the *Comparative Value of Antiseptics*. He stated that the proportion of germicidal to infected matter was as three to one, and the time of application from five seconds to five minutes.

Amputation Below the Knee-Joint in Preference to 'Brisement Force' or Resection in Certain Cases of Deformity, with Anchylosis, Illustrated by Two Cases, was the subject of an address by Dr. Lewis Hall Sayre, of New York. Among other things, he said that certain cases of diseases of the knee-joint, unless treated with proper extension and counter-

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extension, result in more or less deformity, consisting of flexion and luxation of the leg backward. In this position the limb may become solidified or fixed. If the anchylosis is fibrous it can be broken up, and frequently results in the use of the limb and the use of the joint. If the solidification is bony and the limb of the same length as the other V section through the angle of the deformity, an operation should be performed, and the limb straightened and anchylosed in this position. But in those cases where the disease of the joint has taken place in early life and resulted in bony anchylosis and deformity, the limb below the joint grows much more slowly than the other, and as after V sections through the bone the limb does not grow, by the time the patient reaches adult life it becomes so short as to be practically useless. In these classes of cases, amputation below the knee-joint is preferable when performed by a modification of Professor Smith's amputation at the knee-joint, Dr. Sayre preferring to saw through the head of the tibia rather than disarticulate at the joint. He exhibited several photographs, showing the condition of the stump seventeen days after the operation, completely healed, with the cicatrix entirely behind and not subjected to the pressure of an artificial limb, as well as the limb applied in the standing and sitting posture.

Treatment of Unreduced Cases of Dislocation of the Ulna in Connection with Colles' Fracture, was the subject of a paper by Dr. E. M. Moore, of Rochester, New York. His theory briefly is that in cases of Colles' fracture of the radius, there is also dislocation of the styloid extremity of the ulna, which dislocation in many cases is not reduced and great deformity is the result. At any time before six months, he re-breaks the united fracture and attempts a reduction of the dislocation; but when the cases are of so long standing as not to permit of breaking the bone, he excises the extremity of the ulna, thus making a useful and movable joint.

Treatment of Tender Spines by Subcutaneous Incisions.—Dr. V. N. Coffman, of Omaha, Neb., took issue with the usual method of treatment in such cases, and said: "The simple but effective method—rest always implied—is subcutaneous incision over the spines implicated, dividing the constricting tissue, be that what it may. The procedure is, introduce a tenotome under the skin at a point below the tender spot, passing it above and below it; and by pressure over the instrument, withdrawing it, cutting down on the bone; and in case of tendinous structure being involved, divide the sheath

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of the tendons, or make a longitudinal incission of the tendon itself; likewise incising the aponeurosis when this is the seat of mischief."

THIRD DAY—*June 7th.*—**Excision of Both Hip-Joints for Morbus Coxarius.**—Dr. Wm. A. Byrd, of Quincy, Ill., said that ever since the first suggestion of the removal of the head of the femur by Mr. Charles White, in 1769, for morbus coxarius, and the execution of it first by Schmalz in 1816, as stated by Dr. Sayre, and by Anthony White, in 1822, as claimed by Barwell, there has been great diversity of opinion among surgeons in regard to the propriety of this operation. A few favored and many condemned it as being entirely useless, claiming that even when it succeeded in saving the life of the patient, it left a miserably deformed being, unable to walk without the aid of crutch or cane; and the chances of cure were no greater than if the patient was allowed to depend upon the slow process of spontaneous exfoliation of the diseased bone, a process which was rarely accomplished before the death of the patient. Opinions have greatly changed since the excisions have become numerous enough to compare with the older method. Cases where double excisions are necessary are rare. The case he reports is not only able to walk without crutches, but she goes up and down stairs very well without them, and attends school every day. She is ten years old, and needs crutches only when passing over rough ground. He began the operation April 27, 1881, and removed the head and upper part of the right femur. He commenced the incision two inches above the great trochanter, and continued it downward, curving it so as to pass behind the great trochanter, ending five inches below its origin. The soft parts were pulled aside and detached carefully with the periosteum from the bone with a dental scraper, an operation easily effected. The head of the bone was thrown out through the opening, and on account of the softened condition of the bone, it was divided just below the trochanter with the pliers, there appearing to be no other portion of the bone diseased. Both wounds were dressed with balsam peru and oakum. A photograph, illustrative of this case, was passed around the house for inspection. He called attention to the time supervening between the attack and the excision of the first joint, showing the period to be about four months. The doctor called attention to the splint used by himself, first brought to his notice by Dr. Charles T. Parks, of Chicago, but stated that the inven-

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tor himself, Dr. W. T. Verity, of Chicago, was present, and called upon him to exhibit and explain his apparatus.

Dr. Verity placed upon the platform an upright post, to which he attached a triangular frame made of strips of wood, fastened together by strong strap-iron hinges, and attached to the upright by means of a clamp. From the extremity of this triangle hung, suspended by a strong cord, the wire framework in which the patient lies, capable of adjustment to fit any desired position of the limbs. The triangular frame can also be adjusted at any angle, and is capable of being attached to a door-post, or any such convenient upright. The entire apparatus is very portable, and can be packed up for transportation in a few seconds; while in this condition, it occupies no more space than an ordinary violin box.

Dr. Sayre, of New York, complimented Dr. Verity very highly upon having the correct idea of suspension, but claimed for his father and himself the origination of the principle involved in the construction of every apparatus for that purpose. The Doctor went on to criticise at some length the paper of Dr. Byrd.

Dr. Gunn, of Chicago, again called attention to the splint of Dr. Verity, amplifying upon its utility, and stating that it was in universal use in the cases to which it applied.

Surgical Treatment of Intestinal Obstruction.—Dr. H. O. Marcy, of Boston, stated that great triumphs had been achieved during the last decade in abdominal operations, and divided intestinal obstructions into three classes—chronic, late acute and early acute, each of which might be caused by fæcal impaction, fibrous and cancerous structure, intussusception, injuries, etc. The first important thing was a prompt and correct diagnosis. He asserted that the aspirator could be used to relieve gaseous distension with almost absolute safety, and that its use is followed by relief, although only palliative and not curative. He mentioned the production of distension of the rectum by means of gaseous and liquid inflation, recommending, however, that no time be lost in resorting to an operation, as the location of the trouble cannot be accurately known. Dr. Marcy would recommend opening the abdominal cavity in the medial line, taking care to preserve the utmost cleanliness during the operation. After the obstruction has been removed, the edges of the wound should be brought accurately together, especially the opposed edges of the peritoneum, as the hæmorrhage is generally important.

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The principal point in the paper that provoked discussion was the statement that carbolic acid is the best thing to destroy the germs of decomposition. Dr. Gordon, of Maine, disagreed with this view, and predicted that in a very few years physicians would be held criminally liable for the use of carbolic acid spray. Dr. Moore, of New York, also stated that he did not use the carbolic acid in his practice.

Dr. Prewett, of Missouri, read a paper giving *a new operation for the cure of ranula*, which was referred, without discussion, to the Committee on Publication.

Dr. Ranserhoff, of Cincinnati, followed with an elaborate discourse on the *Early Use of the Trephine*, which was most warmly approved by Dr. Gunn, of Chicago, and Dr. Hyde, of New York, the latter instancing a number of points deserving praise.

Dr. J. H. Reynolds, of Michigan, addressed the Section on the *Treatment of Stricture of the Urethra.*

Dr. B. A. Watson, of Jersey City, was then called to the chair to relieve Dr. Peck, and presided through the remainder of the session.

Dr. Bontecou, of New York, spoke extemporarily on the *Treatment of Cystitis by External Urethrotomy*, and his paper on that subject, which is yet to be handed in, was referred to the usual committee.

Dr. J. H. Warren, of Massachusetts, next occupied a considerable portion of time reading his paper on *Tissue Repair*, or *Pathology of Subcutaneous Injections in Cases of Hernia*, although he condensed it to the last degree. He exhibited an improved syringe that discharges its contents automatically, upon the slight pressure of a knob attached to the instrument.

OBSTETRICS AND DISEASES OF WOMEN.

First Day—*June 5th.*—Chairman, Dr. John K. Bartlett, of Milwaukie, Wis.; Acting Secretary, Dr. J. T. Jennings, Hot Springs, Ark.

Chronic Inter-Pelvic Inflammation.—Dr. Wm. H. Byford, of Chicago, read a paper on this subject. He said, the terms parametritis and perimetritis are erroneously supposed by many to include the whole subject of inter-pelvic inflammation. These terms are misleading, because, as now often used, they present the idea that all cases of inflammation not confined to the uterus, must belong to one or the other of them. Actual observation teaches the important fact that

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perimetritis and parametritis usually exist together and are usually complicated with inflammation of the uterus, and not infrequently the ovaries and Fallopian tubes are involved. The obvious conditions of chronic parametritis are, first, suppuration, or chronic pelvic abscess, located more frequently, but not always, in the broad ligament, the consequence of cellulitis. The chronic pelvic abscess is generally the sequel of acute inflammation and attains chronicity from the imperfect evacuation of the pus after acute inflammation has terminated in suppuration. The remedy in such cases consists in making a more direct outlet through the vagina large enough to at once completely evacuate the pus and enable the surgeon to cleanse and disinfect the cavity. The Doctor cited several cases, and said: The main object of his paper was to caution his associates against the dangers of converting a chronic pelvic inflammation into a disastrous acute form. A summary of suggestions and inferences drawn from it is as follows:

1. The sometimes terrible effects of examinations or operations in the pelvis do not often, if ever, take place when there is not a perceptible predisposing inflammation.

2. The inflammation may be so slight as to be easily overlooked.

3. It may be an original condition; the sequence of an acute attack long gone by; or it may be the product of some immediately previous examination or operation, the effects of which have not subsided.

4. To avoid the dangers of acute inflammation, we should, in making a first examination for pelvic disease, conduct it in such a way as not to give the patient much pain, and when she complains of much pain and suffering, desist, at the sacrifice of complete diagnosis.

5. Complaints of much tenderness to the touch, or the use of instruments, especially in parous women, is sufficiently diagnostic of inflammation upon which to base treatment for that condition.

6. If, with such tenderness, a thorough examination or an operation is imperative, it should be done under profound anæsthesia. There is no question in my mind that much less danger of ill effects is incurred in making examinations or operations, on susceptible subjects, under the free use of anæsthetics.

7. Examinations or operations should not be repeated until the effects of the first have entirely passed off.

8. As chronic parametritis is a frequent complication of

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nost of the morbid conditions of the uterus, it should be lways inspected, and its diagnosis be carefully considered in ll cases of metritis.

9. When chronic parametritis is present, it should be the hief, if not exclusive, object of treatment until removed.

10. It is not safe to use the sound, sponge tent, or intra-terine stem when there is perimetric inflammation.

11. It is especially dangerous to replace a displaced uterus hen it is bound down by inflammatory adhesion, by any neans which will overcome its fixedness by force.

12. All local treatment of the uterus must be conducted ith the greatest care in all cases where the complication is resent.

Post-Partum Polypoid Tumors.—Dr. Henry G. Landis, of olumbus, Ohio, described four forms of this kind of tumor: 1) Fibrinous blood-clots, gradually formed; (2) The same, ntermixed with fragments of placenta and membranes; (3) rematurely detached strips of decidua, with blood-clots; nd (4) Hypertrophied patches of decidua. He detailed two ases of this kind—only a few others being on record.

Restoration of the Perineum by a New Method.—Dr. Henry . Marcy, of Boston, read a paper on this subject. He said e perineal body is now recognized as of anatomical utility, nd is the keystone in the arch of perineal support. His ethod of repairing the ruptured perineum is by means of teral support. He uses German-silver wire, which pos-sses sufficient elasticity to make lateral tension. The wire nds are so bent to each other as to form a support. Thus a nd of safety-pin holds the refreshened parts together.

Enterotomy as a Complication in Ovariotomy or Oophorectomy. r. R. S. Sutton, of Pittsburg, Pa., related two cases of re-oval of several inches of the small intestine—one by Prof. llroth, of Vienna, and one by himself. Both cases re-vered. His case was a lady, and a few months ago he suc-ssfully removed four inches of the small intestine. It was ated that this was the first successful operation of the kind er performed in this country.

SECOND DAY—*June 6th.*—**What Means can be Judiciously ed to Shorten the Term and Lessen the Pangs of Labor,** was e subject of a paper by Dr. John Morris, of Baltimore, d. He described lingering labor. He divided it into ree stages. (1) When the head remains high up. (2) hen it has descended into the pelvic cavity, but the parts e tense and undilatable. Then the child impinges on the

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perineum. He explained the procedures to be used in all these conditions, and at what time to employ them. These procedures were detaching the membrane around the cervix with the finger in the first stage; dilating the os with the pulpy part of the finger and stretching it continuously during each pain; rupturing the membranes; forcible external compression pushing the cervix over the occiput; administration of opium, ergot—but never in first cases—and finally chloroform. These means all failing, the only alternative is the forceps. The Doctor said that if the means he suggested were employed, laceration of the os and perineum, those *betes noir* of modern medical literature, would be obviated, and post partum hæmorrhage, that greatest of all complications in labor, would be prevented.

Dr. E. C. Dudley, of Illinois, read a paper on *Immediate Application of Sutures in Puerperal Laceration of the Cervix and Perineum.*

Dr. W. H. Taylor, of Cincinnati, O., reported a case of *Laparo-Elytrotomy.*

THIRD DAY—*June 7th.*—**Value of Gynæcological Treatment in Hysteria and Allied Affections.**—Dr. P. Zenner, of Ohio, said that the occasional dependence of nervous disease on disease of female genitalia, and successful results of the treatment of the same case has unfortunately led to the too general advocacy of gynæcological measures in nervous diseases. It is time to recognize that such measures may do harm as well as good. Hysteria is essentially dependent upon a constitutional predisposition, often of hereditary origin. Disease of the uterus or ovaries may favor this predisposition by the general debilitative effect of the disease, or may be an exciting cause in an inflex way by irritating the genital nerves. But this is perhaps not as common a cause as is generally supposed. The two are often found together, because the same soil favors both. Many cases occur where the cure of the uterine disease does not affect the nervous malady; also, where the latter is cured by proper measures, while the uterine disease remains. He then detailed cases seen by himself and others, where local examination or treatment had directly provoked aggravated nervous diseases. This effect is perhaps produced principally by mental causes, the humiliation to the maiden, the mind dwelling on the genitalia or its disease; also local treatment may injure by irritating the genital nerves. As regards practical rules, fortunately local diseases which produce nervous symptoms, usually cause

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local symptoms, and therefore in themselves demand
l treatment. But we cannot too strongly condemn the
miscuous examination of maidens or married women
nly because there are nervous symptoms. We must
ays remember that the general treatment, the toning up
nervous system, is the most important object. In fact
duty of the physician demands much more than the
e treatment of existing nervous manifestations. He
uld attempt to prevent the disease, to eradicate the pre-
osition upon which it depends. He must warn society
the idle lives of its fashionable ladies, with just such
loyment or amusements as heat up an already wayward
gination, or foster the morbid feelings in their nature,
st produce hysterical affections in them, just as overwork,
nse application to business, and, even more, the unfortu-
ly common habits of public and private gambling, are
ling to immense mental injury among men The physi-
n should follow the history of the predisposed individual
attempt to prevent the development of the disease. He
uld inculcate the practice of proper hygienic regulations
childhood, point out a system of education that will
ndly develop body and mind, and lead to habits of self-
trol and unselfishness, but especially at the period of
erty, by suggesting useful employment or earnest study;
uld guard against means that heat a naturally too fervid
gination, and, above all, try to keep the thoughts from
genital functions. When the disease already exists,
per moral hygienic and constitutional treatment, hydro-
aphy, etc., and in very obstinate cases the plan of treat-
nt brought forward by our eminent countryman, Weir
chell, will often lead to happy results.

Dr. M Maughs, of Missouri, read a very interesting paper
the *Midwifery and Gynæcology of the Ancients*, which
wed that the physicians of the first century were familiar
n many of the advanced ideas of modern gynæcology.

DISEASES OF CHILDREN.

IRST DAY—*June 5th.*—Chairman, Dr. Chas. W. Earle,
hicago, Ill.; Secretary, Dr. E. L. Boothby, of Wisconsin.

ephalhæmatoma in the New-Born.—The Chairman, Dr.
le, said cephalhæmatoma is a soft, elastic, fluctuating tu-
, generally painless, and situated upon one of the cranial
es. It takes place with somewhat greater frequency than
literature of the subject would lead us to suppose. He

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has seen four cases in twelve years practice. Contrary to the experience of other observers, all four cases have taken place upon the left parietal bones. It is stated by some writers that in the great majority of cases, indeed, in almost all, the tumors have been upon the right parietal bone, inasmuch as it is this bone that is exposed to the pressure of the rigid *os uteri* in the greatest number of deliveries. This tumor has not, in his practice, made its appearance immediately after birth. Some three or four days have usually elapsed before attention has been called to the difficulty. It has in a few cases been noticed upon both of the parietal bones, although this has not occurred in his practice. When the tumor is first noticed it is a soft and painless enlargement. In the course of a few days a firm bone ridge is usually noticed surrounding the base of the tumor. The seat of the difficulty is between the bone proper and the periosteum, and the enlargement is caused by the rupture of a blood-vessel in this position, and the bony ring is simply bony material thrown out from the periosteum to repair the injury. This ridge, or bony ring, does not contract evenly in all directions, and little hard projections will spring forward from it, showing that the deposit of osseous material does not take place evenly in all directions. As the process of repair goes on, the tumor loses its soft, fluctuating feeling, and in the course of a few weeks nothing can be detected but a slight want of symmetry in the two parietal bones.

There were four diseases with which it was likely to be confounded, namely, caput succedaneum, congenital encephalocele or hernia cerebrum, erectile tumors and crania tabes. Caput succedaneum is an œdematous condition, and does not fluctuate, being only a disease of the scalp, cellular tissues, and blood-vessels; congenital encephalocele never occurs, with a possible exception, on the cranial bones; a vascular tumor has sometimes the same boggy feeling noticed in caput succedaneum, but it has no bony ridge; crania tabes is indicated by the soft places found upon the cranial bonesin rickety children.

The treatment of cephalhæmatoma amounts to a judicious letting alone. The physician will be importuned in and out of season to poultice, blister, to open, and in every way intefere with the process that nature is following out to perfect a cure. In a few cases, however, when the pain, swelling and tension become very great, it is admissible, indeed it is the best practice, to open these tumors and treat them antiseptically.

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SECOND DAY—*June 6th.*—**Unity of Diphtheria and Membranous Croup.**—Dr. Alex. Harris, of Jeffersonton, Va., expressed the opinion that the diseases were identical, and that was impossible to distinguish between the two. Diphtheria was claimed to be a disease of the pharynx, and croup a disease of the larynx; but his experience taught him that membranous croup originates in the larynx only in about 10 or 12 per cent. of all the cases. Virchow at one time based distinction upon the claim that diphtheritic membrane could not be detached without tearing the underlying surface, while the croupous could not be removed. He, however, surrendered this distinction, after closer observation. Dr. McKenzie holds that it has been fully demonstrated that the difference in the degree of adhesiveness is due only to the structure of the parts upon which they exude. Numerous other authorities were adduced to prove his point. It may be assumed that false membrane is as constant a result diphtheritic inflammation or poisoning as the eruption in scarlatina, or the pustule in small-pox, is an effect of the poison upon which those diseases depend; and if this membrane is formed in the pharynx, we consider it equally conclusive as a diagnostic. It appears then only necessary to establish the identity of laryngeal with pharyngeal false membrane to make the former as conclusive a diagnostic as the latter. The difference between laryngeal and pharyngeal false membrane cannot be detected with the naked eye, and microscopists, even, are unable to differentiate.

Dr. Charles W. Earle was frank to admit, after a practice of thirteen years, that he was unable to tell one disease from the other, in other words, he thought they were identical.

The discussion finally took a wider scope, and Dr. Conrad Ulrich, of Pennsylvania, stated that he believed in mercurial treatment for croup. He had dosed a child with 20 grains of calomel, giving as much as 300 grains in forty-eight hours, and by this means had saved the patient's life.

Epidemic Jaundice among Children.—Dr. A. Y. P. Garnett, of Washington, D. C., related the history of an epidemic of jaundice which had come under his notice, for which no apparent cause could be assigned. The history of these cases was related in detail, and the treatment pursued was given entire. He was at a loss to account for the occasion of this epidemic, but as it was in hot weather, was inclined to ascribe it to some unknown action of the atmosphere and temperature upon the nervous system which produced the described symptoms. He held that heat was one of the most

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important agents in the production of jaundice, not onl among children, but among adults. The disease could be and doubtless often was, caused by gastro-duodenal catarrh an abnormal diffusion of bile, a hepatic derangement or ner vous excitement, but in nearly all cases heat was directl responsible. He had noticed during one summer six case of jaundice among children in Washington, all of whic occurred between the first of July and the first of October During the same summer several other physicians had case which showed the same clinical conditions. Though jaun dice sometimes occurs in the winter, the patient's syster has been during the preceding summer fitted for the disease French soldiers fighting in tropical countries had bee attacked by epidemic jaundice, large numbers dying, and th liver and spleen in each case were found to be enlarged an congested. The disease was attributed, by the army sur geons, to the intense and prolonged heat.

Dr. Lynn, of Pennsylvania, said he had noticed a simila epidemic in the valley of the Monongahela. Few of th cases were serious, and nearly all recovered. He had ob served that the disease was confined entirely to children An entire family of children were affected, while those in a adjoining house escaped. He found that little treatment wa necessary. There was no malaria in that section, and h was almost certain the disease was caused by heat.

Surgical Treatment of Purulent Pleuritic Effusions in Child hood.—Dr. W. H. Myer, of Fort Wayne, Ind., said that i 1872 he was called to visit a boy, in whose left pleural cavit a hypodermic needle discovered the presence of fluid. H was advised by a physician of well known ability to continu the course of aspiration which he had previously pursued He did so during the six weeks the patient lived. The resul of these aspirations, in which large quantities of the fluic were drawn off, impressed him so that never after did h follow up a succession of aspirations in empyæma. He i convinced that the aspirator should be used as a curativ procedure in serous effusions only, and the knife in puru lent effusions. The question was propounded whether it emptying a pleural cavity of pus with the aspirator, it doe not refill, and if so, under what circumstances? The write gave as his reasons for preferring the exclusive use of th knife after the first aspiration:—the necessity for frequent re introduction of the needle, which is always painful; th ultimate contraction of the side corresponding with the effu sion, an effect of the operation; its inability to give complet

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speedy re-expansion of the lung, which is afforded by knife. He recommended a course of action which he found advantageous in his practice.

ea for a More Pleasant Medication for Children.—Dr. Chas. Earle said the usual teaspoonful dose of noxious mixtures t out every few hours by physicians to children, was a oach upon the medical profession. The subject of medon for children had been neglected. The noxious doses ot taken by the children, and in consequence recovery layed. It is a doctor's duty to bring the patient back ealth as speedily as possible, and to do this it is necessary ut the medicine in a palatable condition. Many doctors ld make up four- and eight-ounce prescriptions of vile ng stuff which a child would not take, and in consece it was no uncommon thing to see a sick room table red with dollars' worth of medicine which was of no Drugs can be disguised, and there is no better vehicle hich a large number of them can be conveyed into a l's stomach than water. Quinine can be disguised in p of licorice, and other drugs in sugar. It is barbarous rce down a child's throat some of the vile stuff prescribed hysicians. He thought it would be far better for the ician if he would leave off the purely scientific trimgs of the profession, such as studying the peculiar curve forceps, the study of bacteria in their minutiæ, hobbies in ecology and the like, and turn his attention toward ing medicine palatable to children. He mentioned the sability of giving the maximum dose at one time, inl of in broken doses. The propriety of the plan as calted to dispossess the homœopathists from their hold on dren's practice was strongly presented and was deemed reat importance.

HIRD DAY—*June 7th.*—**Dentition.**—Dr. A. H. Good, of na, Ind., said dentition is not properly classed as a dis-, but the diseases which accompany it are numerous. m dentition and its accompanying diseases the mortality reater than from all other diseases to which children are ect. Some children are more easily disturbed by teeththan others, for the reason that they are not so strongly anized, or because of some peculiar susceptibility. At extreme end of each tooth root is the dental foramen ugh which passes the dental nerve, and during the wth of the tooth there is an inflammatory action which, ing through the nerve agency, reflects with great power

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through the same channel and is generally distributed through the sympathetic nerve. We then have, in addition to the tooth acting as a foreign body, a reflex nervous irritability. Our attention is first called to the teeth, and when the gums are swollen they should be divided to relieve pressure, pain, and inflammatory action. We have as concomitant a functional derangement of the stomach and bowels resulting from enervation, the sequel of the reflex nervous irritation, and displaying a yeasty and soured condition. This we may find upon microscopic examination to contain myriads of bacteria (germs). Can we not then trace the origin of bacteria, if found in the stomach and bowels of these patients, to be the result of mal-nutrition and the cause of cholera infantum? The thermal ranges in these cases are various—in the acute form often rising to 103°, 104°, and 105°. The pulse usually corresponds to the temperature. Viewing the disease from my standpoint, I give nervines for the disease proper, and for the secondary symptoms I give sub-nitrate of bismuth and pepsin.

Dr. Reed, of Ohio, believed the reflex nervous action interrupted the working of the nerves of the stomach, and in consequence the secretions of the mucous membrane were cut off, the food would not digest, and hence diarrhœa ensued. He did not, however, endorse the bacteria or germ theory. He would lance the gums of the child to arrest nervous irritation, thus stopping the diarrhœa, and would then place the child on a particular diet. He would feed nothing but milk, and eschew all starchy food.

Pædiatric Medication and its Relation to General Medicine.—Dr. J. B. Casebeer, of Auburn, Ind., said physicians should learn to treat the patient instead of the disease. The same disease could be cured by the same remedy, no matter who the patient or where he lived, provided the medicine be given in proper doses. There was more science in fixing the dose than there was in prescribing the remedy. The dose, also should be made as palatable as possible, so that it would be readily taken and have its desired effect. He had noticed that homœopaths were usually called to attend children and allopaths to treat adults, the latter being better able to take the doses prescribed by allopaths. He was in favor of a more pleasant medication, and he asked his brethren, in the interest of the profession and those whom they serve, to study, appreciate and teach the true relation existing between children and adults—the sprout and the full grown tree—and divorce this branch of the practice from the unnatural

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relation heretofore maintained between it and gynæcology. There is real science in the treatment of children, in whom we read the nature, expression and influence of the disease by natural and rational symptoms, unaided by verbal language. The treatment of children calls for the best efforts of the most scientifie and skillful in our ranks.

Dr. Conrad Ulrich, of Pennsylvania, favored going still further than Dr. Casebeer had gone. He would begin at the beginning of a child's life. First he would get rid of the old-woman notions, the flannel petticoats and heavy woolen clothing. So soon as a child is born, it is wrapped in a heavy flannel bandages, which the nurse draws around its body as tightly as is possible. Next comes a waistband, large and heavy enough to envelop its entire body, attached to which is a flannel skirt a yard or more in length. The little thing is bundled up in all this mass of clothing, no matter what the temperature of the room, and tucked into bed. Such dressing is pernicious and can result in nothing but injury to the child. It has far more to do with the sickness of small children than teething. Pernicious feeding is another thing. The child no sooner has its eyes open than a spoon is at its mouth, and a stream of sugar and water, catnip tea, etc., is started down its throat. I always leave imperative orders that a child must be fed on nothing but milk from the maternal fount. I say stop feeding and dressing, and let the child go to sleep. If it sleeps well it is certainly all right. Physicians have too little regard for infants' stomachs. They usually give too much medicine. Another thing: If a child cries, its mother nurses it, and the little one soon becomes accustomed to this mode of quieting it, and expects it. The mother does not like to hear it cry, and in consequence its stomach is all the time filled with milk, much to its discomfort.

The substance of Dr. Casebeer's closing remarks was to the effect that what the profession needed in the medication of children was pure medicine, given in water, as frequently as possible, and if this practice were followed out, the people in general would prefer the regular physician to the homœopathic practitioners.

Infantile or Essential Paralysis.—Dr. Teale, of Indiana, detailed a history of a case of a female child seventeen months old, suffering from complete paraplegia—considerable dyspnœa, involving the muscles of the neck, dorsum and arms, and an attendant inability to hold up its head. The child had been suddenly attacked while in bed with inability to

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run, walk or to stand. The treatment followed succeeded in dispelling some of the symptoms. The patient has regained the power to move the toes; can sit erect, and easily holds up its head; has no dyspnœa, can flex the legs and thighs, but has only feeble powers of extension; cannot stand, or at best can only do so with aid. In conclusion, the speaker said that, while the true nature of infantile paralysis is unknown, it is only too well established that atrophy and contractions with adhesions are common results. With the best possible treatment, patients will generally remain paralyzed at least for a long time. He closed with an appeal to use all patience and all possible means to induce the flow of blood to the affected extremities, knowing that disease can but result in permanent inability. Dr. Myer, of Indiana, and Dr. Linit, of Ohio, took part in the debate, the latter advising the use of spring jackets.

Dr. Hyatt, of Delaware, in speaking of the use of bromide of potassium, thought it only postponed the attacks.

Dr. Snow, of Michigan, said he was certain the disease could be conquered by judicious attention and treatment. He had seen a case of paralysis caused by the excessive use of bromides, cured by the use of strychnine and other remedies. He was, however, in favor of the use of bromides in cases of epilepsy and insanity. He had used bromide of potassium and bromide of sodium in tremendous doses, and cured a lady of insanity of three months' standing.

Relation between Croup and Diphtheria.—Dr. Sears strongly favored the dual theory, and forcibly set forth the distinctive features of the two diseases.

Dr. Reed, of Mansfield, O., claimed that diphtheria was at times contagious and at others not, and spoke of an epidemic in his city, which was purely infectious and not contagious.

Dr. Ulrich spoke at some length in favor of immense doses of calomel in croup and not in diphtheria, from personal experience.

Dr. Sheehan recommended the use of weak solutions of nitrate of silver, chlorate of potash and tincture of iron given by an atomizer. He exhibited tables which showed the rate of mortality at the various ages, and in the various wards in the city in which he lived.

Dr. Gallagher, of Pittsburgh, was firmly convinced that membranous croup and diphtheria were different only in locality and not in kind.

Dr. Linn, of Pittsburgh, adduced instances where calomel was used with success in diphtheria.

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Dr. Hyatt, of Delaware, deprecated severely the wholesale e of calomel, and quite as strongly recommended the use digitalis, alleging as his reasons that calomel was too de-essing, while digitalis is calculated to tone up the action of e heart.

Dr. E. S. Snow, of Michigan, feared the use of digitalis, d believed that the interest which the profession felt in this atter was due to the fact that all had experienced trouble th the disease.

It having been stated that there was no specific for diph-eria, Dr. Sloan, of Pennsylvania, arose to state that he had his practice found that which he would call a specific, at st he had found it so. He had tried the old systems; had ed calomel, the nitrate of silver method, and had lost cases th such frequency as to alarm him. A fellow-practitioner ggested to him to use the corrosive chloride of mercury, nich he did in doses varying from one-sixteenth to one-enty-fourth of a grain, with such unvarying success as to duce him to use it throughout his practice.

DENTAL AND ORAL SURGERY.

First Day—*June 5th.*—Chairman, Dr. D. H. Goodwillie, ew York, N. Y.; Secretary, Dr. T. W. Brophy, of Illinois.

Denudation and Erosion of Teeth,—Dr. John S. Marshall, Chicago, Ill., said, begins with the enamel, and gradually volves the subjacent dentine, without any of the appear-ces or characteristics of dental caries. It consists of a neral wasting of the enamel and dentine, generally upon e labial and buccal surfaces, most often beginning with e incisors, though it may attack other teeth first, and may volve all of the teeth to the second molars. It usually be-ns at the gum, forming grooves or cavities which follow e curves on the gum lines. They are as evenly and smooth-cut as though made with a file or disk, are highly polish-, perfectly hard, and many times absolutely free from dis-loration. The surface of the grooves is generally quite nsitive, sometimes exquisitely so, causing the patient much easiness and pain. Occasionally the process begins at merous irregular points on the labial surface which extend, d after a time coalesce, involving the loss of the entire amel wall of the surface. The disease progresses in rare ses as far as the pulp, laying that organ bare, while in the jority, nature provides against it by filling up the pulp amber with secondary dentine, thus protecting it from ex-

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posure. The upper teeth are much more liable to be attacked than the lower, though cases are quite common in which both jaws are affected.

After quoting from a long list of dental pathologists as to the cause of the disease, Dr. Marshall said he was deeply impressed that in the electro-chemical theory of decay, of Mr. Bridgeman, lies the solution of the problem. "The case recorded by Dr. Eleazer Parmly had always been a mystery to me until I studied Mr. Bridgeman's experiments, and since that time I have felt that here was possibly the explanation that it was of electro-galvanic origin, the plate and the teeth forming the elements of a battery, and the buccal mucus which is always of slightly acid secretion, in contact with the labial and buccal surface, forming the acid medium by which the current was established and maintained. Now may we not carry this thought a little further and apply this theory of Bridgeman to this disease? The tooth invested at the root by vital tissues, renders it electro-positive, thus forming the positive element of a battery; the air surrounding the crown or exposed portion, renders that electro-negative to the root and forms the negative element: in other words, the tooth is polarized. The only thing now needed to establish an active current, is an acid fluid, and that we have almost constantly in contact with the labial, buccal, and approximal surfaces of the teeth at just the points where disease manifests itself. A piece of metal when polarized is positive at one end and negative at the other, the other neutrality being reached at the centre. In the case of the copper wire in Bridgeman's experiments, only that portion of the wire exposed to the atmosphere was rendered negative, no matter how much or how little was exposed, and the neutral point was reached at that portion protected from the action of the atmosphere. The greatest loss of substance of the copper wire was at the surface of the fluid, (dilute sulphuric acid) or where the fluid and the atmosphere came in contact, and beneath the fluid there was no action at all. We argue, therefore, that like the copper wire the tooth will be acted upon most vigorously at the juncture of the two poles, provided there is an acid medium like the buccal mucus to establish and maintain the electro-chemical action. By this action the lime salts are removed at the juncture between the atmosphere and buccal and mucus, and washed away." This theory also explains one of the very common, and peculiar, phenomena of the disease, viz., the undercut condition of the grooves at the border nearest the gum. It

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a law of electricity that the main current always flows
m the positive to the negative pole, and that the positive
ment is most readily acted upon and soonest destroyed.
e same laws govern like conditions in the mouth, the root
the tooth being positive and the crown exposed to the at-
sphere (and not protected by fluid) negative, the greatest
ste would be toward the root or positive pole, and as soon
the gum line was nearly reached, the external surface
uld be protected by the fluid always present at this point,
d the loss of substance ceases while the other portions
ward the root would be acted upon with the original in-
sity, and thus in time the undercut condition.

Another factor entering into this problem is vital resist-
ce, and it doubtless must exert a powerful modifying in-
ence over electro chemical action, for teeth of the best
ganization have stronger vital resistance than teeth poorly
veloped; this is illustrated by the marked difference with
hich these teeth yield to the ravages of dental decay.

The teeth most often attacked by denudation or erosion
e those that are medium or soft teeth, low in vital resist-
ce, the patient often inheriting a peculiar cachexia, the
rofulous or syphilitic, which has had a depressing influ-
ce upon the developmental process, thus lowering the
wer of vital resistance and predisposing the teeth as well
other organs of the body to the ravages of disease.

At the conclusion of the papers Drs. Henry, Noyes, Nichol,
inton of New York, entered the room and objected to Dr.
d Goodwillie presiding over the meeting. Dr. Goodwillie
id he did not know the three gentlemen, and did not know
hether or not they had a right to speak. They stated that
ey were informed that Dr. Goodwillie had registered as a
legate to the convention under a protest from the judicial
oard. They showed no official document or other evidence
at what they said was true except their own statements,
t Dr. Goodwillie resigned the chair to Secretary Brophy.
r. Vance, of Cleveland, thought the chairman should con-
nue to discharge his duties until an official notice that he
as disqualified to do so be received from the judicial board,
t Dr. Goodwillie refused, and Dr. Williams was elected tem-
orary chairman. Drs. Noyes, Nichol, and Hinton immedi-
ely left the hall. The trouble, it is said, grows out of the fact
at Dr. Goodwillie is a member of, and favors the recent
tion of the Medical Society of the State of New York
garding the "code." He is, however, a permanent mem-
er of the American Medical Association; and was the

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founder of this Section only a year or two ago, of which he was appointed Chairman.

SECOND DAY—*June 6th.*—Dr. John S. Marshall, of Chicago, reported a curious case of *Caries of the Maxillary Bones.* The alveolar processes surrounding the anterior upper teeth upon the labial surface were destroyed, the teeth being very loose, and the roots distinctly felt through the gums. There was profuse discharge of pus, and a probe could be passed from the margin of the gums to beyond the apex of the left lateral incisor and left canine, forming a pocket above. The other teeth were affected in a less degree, the loss of osseous tissue extending from the margin of the gums to the junction of the middle and upper third of the roots. The case was treated by thoroughly scraping the roots of the teeth and the diseased edges of the alveolar process with chisels made for the purpose and afterwards injecting dilute aromatic sulphuric acid, and later, phenic acid in solution. The case when discharged, after being under treatment for about three months, was entirely cured; the teeth were firm and the lost osseous tissue about the apex of the teeth was seemingly restored.

Dr. Eugene S. Talbot, of Chicago, detailed *Two Cases of Septicæmia due to Alveolar Abscesses.* A lady who, while at the seashore, was attacked with a violent toothache. She went to a dentist, who treated for decayed pulp, affording her temporary relief. He advised her, however, upon her return to Chicago to consult her dentist and have the tooth attended to more thoroughly. The toothache failing to return, she neglected to visit her dentist as directed. In the course of a few weeks she gradually began to lose her appetite and consulted a physician, who, upon examination, could not discover that there was anything the matter with her. He advised her to again visit the seashore, thinking that a change of scenery and society would bring back her appetite. She did as directed, but failed to find relief, returning to Chicago in two weeks much worse than before her departure. A short time thereafter a small swelling made its appearance upon her face, and she then consulted Dr. Talbot, who discovered that she was suffering from blood-poisoning from an alveolar abscess, produced by the diseased tooth. He treated the tooth in the manner described by Dr. Marshall, and in about six months the lady was entirely restored to health. The other case was that of a man similarly affected. So severe was his suffering that he was confined to bed for sev-

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al months, and was finally restored to health by a general tiseptic treatment—local as well as constitutional.

THIRD DAY—*June 7th.*—**Diseases of the Maxillary Sinus.**—. Geo. D. Parmlee, of Hartford, Conn., spoke of the interest aching to this subject on account of the intimate relation isting between the locality and the roots of the superior olar and bicuspids. The three points of relation of the eatest importance, viz: to the teeth, to the nose and to the es. Instances were related of accidents occurring, in one which the eyeball was driven down into the antrum during racture of the bones of the face. The eye was replaced in orbit, the sight being uninjured. In the course of some nths, however, ulceration and suppuration of the cornea curred and the globe atrophied. Tooth-picks, stumps of th, etc., have been found in this cavity, and it has even en stated that larvæ of flies have been found.

Dr. John Marshall read a paper prepared by Dr. W. W. lport, of Chicago, in which a case of ***amaurosis dependant on dental irritation*** was related, extending over a period of o years. Ophthalmologists who were consulted on the bject were entirely unable to find a cause for the difficulty, d no one seemed at all to understand the case. Finally e lady so affected applied to her dentist, who found that e trouble lay in partial calcification of the pulp, which was ally removed entire, and the pulp canal permanently filled. ie discussion of both the papers was participated in by s. Buffett, Williams, Brophy, Butler, Marshall and others. Dr. Marshall reported for the committee appointed to con- er the appointment of dental surgeons in the Army and vy that there had been a misunderstanding in presenting e matter to the Surgeons General of the Army and Navy. is intended to ask their co-operation in gathering statistics dental diseases among soldiers and sailors. that data might obtained on which to base an opinion of the needs of the vice for such surgeons. On motion of Dr. Williams the mmittee was continued.

STATE MEDICINE.

FIRST DAY—*June 5th.*—Chairman, Dr. Foster Pratt, of lamazoo, Mich.; Secretary, Dr. Thos. L. Mal, of Ohio.

Medical Education the Fundamental Fact in Medical Ethics.—. A. L. Gihon, U. S. Navy, announced this as the title of paper. After pointing out many illustrations of igno- ice on the part of a large proportion holding diplomas

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from even the most reputable of the medical colleges of the country, he concluded by offering resolutions for recommendation to the Association urging that fellowship be refused to "illiterate, ignorant and incompetent graduates," that boards of medical examiners be organized in every State, that colleges confer the degree of Bachelor of Medicine upon graduates, who shall be eligible to the degree of Doctor of Medicine at the end of three years.

SECOND DAY—*June 6th.*—**Working of the Illinois State Board of Health.**—Dr. H. A. Johnson, of Chicago. He stated that the Board is six years old, and has met expectations. He then gave a synopsis of the work of the board since its organization, July 1, 1877. There are on the board beside the so-called regular physicians, one homeopathic, one eclectic, and two laymen. There has been some criticism of this composition of the board, but that has been mostly disarmed by the result of the working of the board, for a large number of irresponsible quacks have been driven from practice in the State. Where in 1877 there was one so-called doctor to every 399 persons in Illinois, now there is only one doctor to every 620 people. The board has promptly utilized all available agencies, and alike in the protection of our southern extremity from yellow fever, through its connection and influence with the sanitary council of the Mississippi Valley, as in guarding our eastern boundary from importation of small-pox, through the emigrant inspection system of the National Board of Health, it has demonstrated the feasibility of a public health service in entire consonance with any or all political theories. Perhaps this was to be expected of a State whose coat of arms bears both these mottoes. It is gratifying to discover an organization capable of defining State medicine in a cosmopolitan spirit, and thence to avail itself as quickly of the resources of the Federal treasury and national authority on the one hand, as of the moral and material support of a volunteer co-operation on the other.

The reading of this paper was followed by a controversy over the code of ethics, that subject which will not down, spite all efforts to avoid its discussion. Dr. John H. Rauch, secretary of the Illinois State Board of Health, with Dr. Johnson, answered numerous questions asked them concerning the board.

Dr. Hopkins, of New York considered it inconsistent in the American Medical Association, that there should be a body of physicians in Illinois who, acting with eclectics and

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homeopaths, license eclectics and homeopaths, while the whole world is turned upside down because the New York Association only proposes to adopt a new code of ethics, while practically such a new code is in operation in Illinois. Doctors Johnson and Rauch maintained that the code is not violated by the doctors on the Illinois Board of Health, but that they simply act with the two so-called irregular physicians on that board in an official capacity as they would with any citizens appointed on it.

Resolutions eulogistic of Dr. Wm. Farr, of London, were unanimously adopted.

THIRD DAY—*June 7th.*—The resolution of Dr. Gihon, offered June 5th, engaged most of the attention this afternoon. He wished to explain his position in regard to the code, as many physicians had a mistaken impression concerning his views on the subject. He then stated that he believed in the code of the American Medical Association, had signed it, and should stand by it. He knew nothing about the New York code, but was opposed to it if it antagonizes the code of the American Association. He added that this is a free country, and of course every man has a right to criticise any portion of the code if he is so disposed. His resolutions were then taken up *ad seriatem*. These resolutions were to the effect that the Association take steps toward preventing incompetent persons from entering the medical profession by refusing fellowship to them. They also called attention to the necessity for creating State Boards of Medical Examiners, whose certificates shall be necessary to the issue of a license to practice medicine. Every section of the resolution was taken up separately and discussed. The first two sections were voted down, whereupon Dr. Gihon withdrew the others.

Dr. A. N. Bell, of New York, called attention to the condition of emigrant ships, and introduced a resolution as follows:

"Being impressed with the truthfulness and importance of the Memorial of the Parliamentary Bills Committee of the British Medical Association, under date of March 17, 1883, the American Medical Association urges upon the Congress of the United States the subject of competent medical and sanitary service and proper provision for its maintenance on board all trans-oceanic passenger vessels, and that a committee of five be appointed to promote this object and to report upon the condition of the subject at the next session." The resolution was adopted.

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EYE, EAR AND THROAT.

FIRST DAY—*June 5th*—Chairman, Dr. J. J. Chisolm, Baltimore, Md.; Secretary, Dr. Carl Seiler, Philadelphia, Pa.

Dr. Lawrence Turnbull, of Philadelphia, read a paper on *Paralysis of the Facial Nerve as Connected with Ear Diseases*, which was largely discussed.

Dr. W. C. Jarvis, of New York, presented a paper on *Removing Enlarged Tonsils without Hæmorrhage by Means of his "Snare."*

A paper on the *Action of Nitrate of Silver on the Mucous Membrane of the Throat and Nose*, by Carl Seiler, M. D., of Philadelphia, elicited much discussion. He stated his opinion that nitrate of silver was not a caustic. The majority of those present agreed with the author's theory.

SECOND DAY—*June 6th.*—**Tinnitus Aurium and Deafness which Accompanies Different Forms of Bright's Disease** was the title of a paper by Dr. Laurence Turnbull, of Philadelphia, in which he stated that in all cases of Bright's disease, ear symptoms are present, and especially in that form in which fatty degeneration of the kidneys has taken place.

Dr. J. L. Thompson, of Indianapolis, in his paper on the *Question of Etiology of Some Forms of Lenticular Opacity*, described a peculiar opacity in the lower periphery of the lens, which comes on suddenly, and remains unaltered for years, causing blindness, but which is different from cataract. The doctor said that he was ignorant of the cause, but had found it in cases of diabetes.

Dr. Noyes, of New York, said he had seen similar cases, and they were not infrequently associated with myopia, of molecular form. There was another class of cases, the cause of the opacity being choroidal retinitis, occurring more frequently in the lower periphery of the lens, and the doctor thought it was due to alteration in the nutrition of the hexagonal epithelium.

Dr. Howe, of Buffalo, said that opacity of the lens was frequently absorbed by tearing the capsule.

Dr. H. Culbertson, of Columbus, O., read a paper on a *Case Illustrating Segmental Features in Glaucoma.* The glaucoma occurred only in a portion of the eye.

Nasal Disease, the Frequent Cause of Asthma.—Dr. J. O. Roe, of Rochester, N. Y., claims that many cases of asthma were due to disease, and obstruction of the nasal chambers, and could be cured by removing the nasal disease.

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Dr. Seiler, of Philadelphia, had had cases under treatment which the touch of the probe to the diseased spot had sed an attack of asthma, and that the cure was to cauize the spot. In addition, hay asthma, or, as it is comnly called, "hay fever," was due to the same cause—to onic disease of the nasal mucous membrane, which becomirritated by the pollen grains floating in the air in the umn could always be cured by removing the chronic nasal tation.

Dr. Frothingham, of Ohio, said he could not see that these es differed from any ordinary cases of inflammation of the nchial tubes.

Dr. Roe, of Rochester, N. Y., concluding the discussion, arly showed that Dr. Frothingham was in error.

THIRD DAY—*June 7th.*—**Appearance of the Mucous Membrane of the Throat and Nose in Adult Patients.**—Dr. Rumbold, St. Louis, stated that the inflammatory process of mucous mbrane produced different appearances in patients of difent ages, and that in smokers the color of the mucous mbrane, and, especially of the vocal cords, is always abmal. In most cases of irritation of the throat the cause s to be looked for in disease of the naso-pharyngeal space. Dr. Seiler, of Philadelphia, agreed with the author of the per as to the cause of chronic laryngitis, and that it would well if the nasal catarrh were cured. As to the discoltion and disease of the vocal cords in smokers, he differed m Dr. Rumbold. His experience had shown him that arette smokers were always affected with chronic laryns, because of inhalation of the smoke; but cigar and pipe okers were never so affected.

Dr. Rumbold, in defense of his position, made the asserh that every smoker in the room had chronic laryngitis, emark that brought forth some laughter.

Dr. Chisolm delivered a discourse entitled: "*Is Abscission Proper Operation?*" It was discussed at some length by s. Frothingham, of Ohio; Thompson, of Indiana; Noyes, New York; Conner, of Michigan, and many others.

In a very interesting paper on *A Form of Spectacles in Lieu Nose Pieces*, Dr. Culbertson, of Ohio, described a pair of ctacles for constant use, and of his own conception, hav; in front detachable half glasses for near vision, which, ether with the permanent glasses, correct the error of ion, thus avoiding the disadvantages of bifocal glasses. The discussion of the paper was participated in by Drs. othingham, Thompson and Culbertson.

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Dr. Cornwell, of Columbus, O., reported several *cases of eye disease* which were freely discussed by those present.

Dr. Seiler, of Philadelphia, exhibited a *case of instruments* that he had used in his practice for the treatment of diseases of the throat and nose.

Dr. Scott, of Cleveland, read a *letter from Dr. Calhoun*, president of this Section, expressing regret because of his inability to meet with the Section. After the adoption of the report of the Committee on Publication, the Section adjourned *sine die*.

Book Notices, &c.

Papers Read before the Medico-Legal Society of New York. Second Series. 1882. CLARK BELL, Esq., New York, President. 8vo. Pp. 530. (From Publication Committee)

Such a Society as this results in good to both professions —Medicine and Law. The associations which result from such an organization brings the lawyer better to understand the doctor, and *vice versa*, and does much to train the attorney to respect the true position of the medical witness. Dr. Stephen Rogers' inaugural address as President points out the general objects of the Society and calls attention to some subjects that materially interest the doctor and the jurist. The report of the Committee on Criminal Abortion suggests some useful legislation. Dr. Wooster Beach gives a full paper on homicide by poisoning, and shows the need of more careful examination of dead bodies found under circumstances at all suspicious. Dr. Wm. A. Hammond reviews at length the medical evidence in the famous David Montgomery Case for wife murder, who was epileptic. Dr. Stephen Rogers gives an excellent paper on the influence of uræmic and alcoholic poisoning on testamentary capacity. Dr. Ely Van de Warker, of Syracuse, N. Y., contributes a paper full of valuable facts and suggestions on the criminal use of proprietary or advertised nostrums. Dr. A. O. Kellogg discusses the subject of epilepsy in its relations to insanity, showing the doubtful responsibility of many victims. Dr. Stephen Rogers well points out the true object of medical legislation in another paper by him. Clark Bell, Esq., in his inaugural address as President, shows the value of this organization to the bench itself in forming its decisions. R. S. Guernsey, Esq., presents the relations of juries and physicians in cases of insanity, and gives good practical advice to the medical expert. D. F. D. Weiss shows the weighty ob-

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tion and responsibility of an administrator of an anæs-
ic. Dr. Eugene Pugnet has an excellent paper on
lico-legal toxicology. The lamented Dr. Geo. M. Beard
usses the legal responsibility in old age. David Dudley
ld, Esq., discusses the law features involved in cases of
otional insanity. Dr. Alonzo Calkins treats of the judi-
execution of the penalty for felonious homicide. Simon
rne, Esq., reviews questions of legal responsibility and
ountability in general. Dr. Eugene Pugnet gives a full
tory of the medical jurisprudence in the case of Stokes
o killed Fisk. William Henry Armour, Esq., details the
n of the writ for the inspection of the abomen—especially
vomen. Horace Barnard, Esq., most strikingly shows the
d of expert witnesses. Dr. S. Waterman shows the im-
tante of the spectroscope in forensic cases. Dr. Julius
igat defines the rights of the insane. Dr. Wm. A. Ham-
nd presents his peculiar views regarding morbid impulse.
Ellenger, Esq., has an interesting—mostly historical—
per on the "Witch's Hammer." John R. Dos Passos,
l„ gives "hints for legislative reform." Jacob F. Miller,
q., closes the volume with law on rape.

We regret exceedingly that our space does not permit of
re than the mention, as above, of the titles of the many
y valuable papers.

sanity: Its Causes and Prevention. By HENRY PUTNAM STEARNS, M. D., Superintendent for the Retreat for the Insane, Hartford, Conn., etc. New York: G. P. Putnam's Sons. 1888. 12mo. Pp. 248. Cloth. Price, $1.50. (For sale by West, Johnston & Co., Richmond.)

After some preliminary remarks relating to the growing terest in the subject, the increase of insanity, insanity as lated to civilization, the author begins to discuss the causes the disease. He first takes up the insane diathesis; then e influence of education—industrial and moral; next redity; the causative results of consanguineous marriages, cohol, tobacco, sex, poverty, religion, and insufficient sleep. roper education at home and in schools is the best pre-ntive. A larger degree of *individuality* should be secured; ore attention should be given to industrial education; cer-in habits should be changed—especially excesses in alcohol, bacco, etc.; more rest for the weary brain should be se-ured; and sanitary surroundings should be improved. any suggestive points of great practical importance are ade. The book is especially adapted to study by the gen-al practitioner, while the educated layman will find in its

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pages many useful facts and hints. We are sorry the book has no index. Otherwise the volume is handsomely issued.

Untoward Effects of Drugs. By Dr. L. LEWIN, Docent of Materia Medica, Hygiene and Public Health, University of Berlin, etc. Second Edition, Revised and Enlarged. Translated by J. J. MULHERON, M. D., Professor of Principles of Medicine, Materia Medica and Therapeutics, Michigan College of Medicine. Detroit: George S. Davis. 1883. 8vo. Pp. 222. Cloth. Price $2. (From Publisher.)

We have laid this book aside for frequent reference hereafter. We feel instructed by its careful perusal, and are confident that it will prove useful many times in the future—either to caution us against the administration of certain agents in certain conditions, or else to enable us to understand some peculiar symptoms after the use of drugs which do not ordinarily belong to the special disease under treatment. The list of drugs, the administration of which have been followed by "untoward effects," as given in this book is quite lengthy, and includes most of the agents in common use. The book is well indexed, which greatly assists one in making a hurried reference; and the translation is so perfect that one who does not examine the title page would scarcely suppose he were being treated to information by a foreigner. Dr. Lewin has succeeded in making a most valuable and authoritative compilation of the records of experiences and observations scattered through the journal and book literature on the unusual action of drugs.

Water Analysis. By G. L. AUSTIN, M. D. Boston: Lee & Shepherd. 1883. 16mo. Pp. 48. Cloth. Price 50 cents. (For sale by J. W. Randolph & English, Richmond.)

The single object aimed at by the author of this pocket-book is to place in the hands of persons not expert chemists an easy method of determining the quality of drinking water as to its wholesomeness or unwholesomeness. A test case, costing $10, is advertised by the publishers, which is said to answer every purpose for the analysis called for by the text. We do not know that there is any special need for such a book, since competent chemists are now so plentiful and analyses of rivers, creeks, ponds, springs and wells, etc., are becoming so general. It is purely a book of surface instruction, and he who knows no more than this book teaches would be dangerous to himself and an ill-adviser to others, on the principle that "a *little* learning is a dangerous thing."

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Therapeutic Handbook of the United States Pharmacopœia. By ROBERT T. EDES, A. B., M. D., Professor of Materia Medica in Harvard University, etc. New York: Wm. Wood & Co. 1883. 8vo. Pp. 397—vi. (By express from Publishers.)

As the title page indicates, this handbook contains a condensed statement of the physiological and toxic action, medicinal value, methods of administration and doses of the drugs and preparations in the last edition (1883) of the United States Pharmacopœia (prepared to correspond both with the apothecaries' and metric systems), with some remarks on unofficinal preparations. Of course the working formulæ of the Pharmacopœia are omitted, as the book is intended for the doctor and not especially for the apothecary. The book has been carefully prepared and well arranged according to the plan of the author; but we doubt if it will exactly meet the wants of the busy practitioner. He will generally prefer either some more systematic work on therapeutics or else will feel satisfied with the National or the U. S. Dispensatory. We are surprised that Dr. Edes omits special mention of the changes of strength and, per consequence, of doses of certain medicines as stated in the late edition of the Pharmacopœia. These changes in the Pharmacopœia are the very ones that most concern the doctor; and we shall not be surprised at some confusion and mistakes in this transition day. No opportunity ought to be lost to acquaint the profession with these changes.

Brain-Rest. By J. LEONARD CORNING, formerly Resident Physician to Hudson River State Hospital for Insane, etc. New York: G. P. Putnam's Sons. 1883. 12mo. Pp. 103. Cloth. Price $1. (For sale by West, Johnston & Co, Richmond.)

The author is an ardent supporter of the cerebral anæmic theory as the cause of natural sleep, combined with intra-anglionic exhaustion. Sleep therefore allows the cerebral anglia to become refreshed by rest. Hence normal sleep mounts to brain-rest. Brain-rest is as essential to a sound mind as muscle rest is to a healthy condition of the body. There is a natural decline of vital powers during the hours of darkness and comparative cold; hence it is necessary to secure the maximum amount of brain rest that the requisite period should be as soon after sunset as possible. Avoid mental worry before bed hours. Rest upon the right side is claimed as the best position for brain repose. Light diet for evening meals is advised, and tea, coffee, etc., condemned.

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Insomnia is then taken up—its causes, effects, and treatment. We cannot follow Dr. Corning further. He is too extreme we think in some of his views, although *generally correct* in his advice. At all events, he gives many facts worthy of thoughtful consideration and study. The monograph is very readable, and its teachings will do more good than injury. The therapeutical portion is very deserving of adoption in order to secure brain rest. The book meets with our favor, although there are some statements of a theoretical character which we cannot consider as proven.

Manual of Gynæcology. By D. BERRY HART, M. D., F. R. C. P. E., Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinburgh, etc.; and A. H. BARBOUR, M. A., B. Sc., M. B., Assistant to Professor of Midwifery, University of Edinburgh, etc. Vol. II. With one Lithograph and 210 Wood cuts. New York. Wm. Wood & Co. 1883. 8vo. Pp. 366. (From Publishers.)

The present volume is the February (1883) number of "Wood's Library of Standard Medical Authors." The *first* volume was noticed in our March issue. The two volumes now issued complete this "Manual on Gynæcology." The second volume fully realizes all the expectations based on an examination of the first. The work is characterized especially by its practical caste—both of text and illustration; and the practices recommended are either so well approved by general experience or by special circumstances, or by the weight of authority as to entitle this manual to rank as a most useful work in the library of every general practitioner of medicine. We would most unreservedly recommend the book to young graduates and others who seek specific directions as to details of treatment or operation in gynæcological cases.

Manual of Chemical Analysis as Applied to the Examination of Medicinal Chemicals. Third Edition, Thoroughly Revised and Greatly Enlarged. By FREDERICK HOFFMANN, A. M., Ph. D., Public Analyst to the State of New York, etc., and FREDERICK B. POWER, Ph. D., Professor of Analytical Chemistry in Philadelphia College of Pharmacy. Philadelphia. Henry C. Lea's Son & Co. 1883. 8vo. Pp. 624. (For sale by West, Johnston & Co., Richmond.)

This Manual is intended as a guide for the determination of the identity and quality of medicinal chemicals, and for the detection of impurities and adulterations; and hence is designed "for the use of pharmacists, physicians, druggists, manufacturing chemists, and pharmaceutical and medical

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ents." The work presupposes a knowledge of at least elements of chemistry, chemical nomenclature, combina-s, etc.; and begins at once with descriptions of the ope-ons by the chemist, his reagents, the methods of making imetric examinations and of separating and recognizing principal alkaloids and allied principles. Part II, de-bes medicinal chemicals and their preparations, the hods of analyses of their constituents, etc. This is the important portion of the work to the toxicologist and rmacist and manufacturing chemist. Tables of ele-nts, their symbols, atomic weights, of thermometric ivalents, of metric and troy weights and measures that y have to be frequently referred to, and other important a are added. The work will prove useful to every doctor o wishes to keep himself informed as to the composition drugs, etc., and who seeks to keep up, even in a measure, ith the times." The authors are authoritative, and they e published a valuable book.

PHLETS, REPRINTS, ETC., RECEIVED for which we have no room for fuller otice, etc.; but most of which can be obtained by enclosing a letter stamp r pamphlet to the respective authors named.

enty-Third Annual Report State Asylum for Insane Crimi-nals, 1882. Auburn, N. Y. Dr. CARLOS F. MCDONALD, Superintendent. 8vo. Pp. 40.

oceedings Sanitary Council Mississippi Valley. 1883. 8vo. Pp. 12. Dr. JOHN H. RAUCH, Springfield, Ill., Secretary.

oceedings Illinois State Board of Health. April, 1883. 8vo. Pp. 19. Dr. J. H. RAUCH, Springfield, Secretary.

Editorial.

American Medical Association.—The session of the Associa-n recently held in Cleveland, and the proceedings of which give in full synopses in this number of the *Monthly*, will rk an era in its history. In the first place, it ends the pe-d of its *annual* itinerancy, as it is to meet every second r in the city of Washington, D. C., beginning with the sion of 1884. We have doubted the propriety of this p, but will watch the result with hope that the doctors ar remote sections will make their biennial journeys east-rd to meet their brothers of the older States.

Again, with the late session, begins an important and, we eve, a proper reformation as to the manner or mode of

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publishing the *Transactions*. About the first of July, 1883, the *Journal of the American Medical Association* (which is to be issued weekly) will be begun, to substitute the volumes of *Transactions* as heretofore published. This *Journal* will have so eminent a gentleman as Professor N. S. Davis, of Chicago—"the father of the Association" itself—as the Editor-in-Chief. He will be aided by such assistants as may be required to give the publication rank with the best journals of the world. The pecuniary success of this enterprise seems assured by the large number of members of the Association—each of whom that pays his annual dues of $5 will be entitled to an annual subscription. Of course, with the representative character of this journal, it is safe to expect an income from 2,000 to 3,000 additional subscribers from the doctors of this country who are not members of the Association, and from the profession of European and other countries. The place of publication is to be Chicago. We trust that we are not officious, and that we may be helping on the organization of the Publication Office, by suggesting to each of our subscribers at once to remit $5 to Dr. Richard J. Dunglison, Treasurer, P. O. Box 2386, Philadelphia, Pa., so as to secure the complete files of the *Journal*.

As to the scientific progress made by the papers read during the general sessions and in the special sections, there seems to have been but little done. There was no lack of papers nor reticence as to discussion of those that were read. These papers and discussions were, as a whole, of average ability, and do no discredit to the authors or to the Association. The fact is, there was but little progress made in the practical departments of medical science during the past year, and hence there were no marked advances to be recorded. The President's Address, by the beloved Dr. Atlee, was devoted to personal reminiscences, which, no doubt, made the older doctors in attendance live over again in happy memory the days that are no more. The address has historical value, and should be carefully preserved in the archives of the Association.

The selection of Dr. Austin Flint, Sr., as President for the ensuing term, was made no less on account of his distinction as an eminent medical authority, the world over, than on account of his uncompromising antagonism to the tenets of the "new-code-of ethics," as adopted by the Medical Society of the State of New York, which code, in brief, practically throws down the bars which heretofore regulated the question as to whom professional consultations were allowable.

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We would have preferred that the appreciative recognition of the eminent merits of Dr. Flint, who has made American medical literature illustrious, had made him President of the Association.

The hospitalities and entertainments given by the Cleveland profession and citizens were liberal and sumptuous. The privileges of the city were freely extended and fully enjoyed by all. Ladies graced every proper occasion for their presence, and social relationships were developed on every hand which will long be cherished.

Considerably over 1,000 doctors from all sections of the United States were registered; and it is said that this attendance was larger than it has ever been in the history of the Association—except at the session held in New York city three or four years ago. Had the number of delegates from the State of New York that usually attend sessions year by been present, the register would perhaps have been the largest ever filled up at an annual meeting.

An old usage or law of the Association required members or delegates in attendance upon a session to sign its Code of Ethics. For some reason, this law has become almost obsolete in its literal fulfilment, and simply a blank registration book was all that was used—the party so registered not even doing so in his own handwriting; but custom had so established this plan of registration as the all-sufficient, that it had the effect of law itself. But at the Cleveland meeting, at somebody's suggestion or by somebody's direction, each delegate or member was required to sign a paper or a card, on which was printed a sentence stating substantially that the undersigned avowed allegiance to the Code of Ethics of the American Medical Association. Some distinguished and influential gentlemen in the profession of the nation, anticipating that some such requirement would be made, declined even to visit Cleveland; a few others, who had not anticipated that this cunning would be attempted, went, saw and left without offering to register, and without material regret that they were not permitted to take part in the proceedings. Dr. D. H. Goodwillie, of New York city, however, did succeed in registering *under protest* as to the manner of his registration as a permanent member; and, no doubt, as the battle waxes warmer than the skirmishing that has begun, his case will become a target, as it were, between the two lines.

The evident purpose of this manœuvre, in requiring a renewal of obligation to the National Medical Code, was possibly planned with good intentions, and the object undoubtedly

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was to remove any opportunity for the dissenters to have a hearing. But was such a policy wise, and did it result in the bettering of the interests of the Association? We fear not. For had there not been an under-current and unexpressed approbation of a revision of the Code, the St. Louis resolutions, which partially made their way into the General Session, would scarcely have been presented at all. The most strenuous efforts were made by those in authority to keep the subject out of general debate, and to remand every question relating to the Code as summarily as possible to the Judicial Council—the complexion of whose almost unanimous opinion was quite well known. We are afraid that the tactics adopted at this session will widen the gap that lies between concession and reconciliation. No one who stands aloof for the present can fail to recognize in all the recent portentous events the gradual growth of a revolution of professional sentiment. Much of the reticence which has the appearance of acquiescence in all the extremes of interpretation of the Code is not due so much to a whole-souled adoption of it as to the respect and reverence which is felt to be due to the fathers who planned the Code and organized the Association. But that which is of human device, in the very nature of things, can scarcely be infallible. The doctrines of one age, which may be well adapted to the wants of that day, may not and generally do not meet the requirements of a future period when evident progress has been made in science, letters and philosophy. It is not because the profession is ahead of the times that it seeks some changes in the laws that were framed a quarter of a century ago and more for its management; but the profession feels itself to be so far behind the times, in this respect, that it urges upon the fathers to put on that dress which does not appear quite so odd because of its antiquated style. Principles live, but there is a good deal of so-called "home-made scripture" extant that can find no text in the Bible for its foundation.

We attempt at present no argument on either side of the question at issue. We wish to be slow in arriving at conclusions as to the exact nature of changes that seem demanded by the rising voice of the profession in order that we may weigh their merits and decide accordingly. But let none of us be influenced by the clap-trap harangues that may be expected to find their way into medical prints on both sides of the issue. Let us keep ourselves on a higher level of debate than that which is indulged in by many ward politicians,

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whose only purpose is to secure office or emolument. Honest men with honest intentions are on both sides of this odal question. Let us dispassionately study the right in rinciple and the best in policy.

Personals, Briefs, Items, etc.—*The Medical and Surgical istory of the War of the Rebellion, and the Army Medical useum.*—In the official announcement by the Adjutant-neral, U. S. Army, of the death of late Surgeon-General rnes, the inauguration of these two serviceable under-ings was accorded to Dr. Barnes. But a recent "official respondence" between the former Surgeon-General, Dr. n. A. Hammond, and the Adjutant-General of the Army, y establishes the fact that Dr. Hammond, while Surgeon-neral, in 1882, founded the "Museum," and inaugurated e "Medical and Surgical History of the War." The Ad-tant-General, in a more recent circular, concedes the fact d has withdrawn the former circular which contained the roneous statement. Dr. Barnes only carried out the plans vised by his predecessor, Dr. Hammond. It is but justice the cause of history and the interests of Dr. Hammond mself that those journals which published the error con-ined in the first circular of the Adjutant-General should ve like publicity to the correction.———*Mellin's Infant ood in Mal-Nutrition.*—Dr. R. L. Barret, of Louisa C. H., a., a graduate of Jefferson Medical College, and an es-emed practitioner for twenty-nine years, and who has never efore given a public endorsement of any preparation, has cently had such remarkable success with Mellin's Food in al-nutrition of infants, that he writes of the Food:—"It is ne of the grandest discoveries of this century, and as much boon to us as any of the advances in the arts or sciences of ne day."———*Officers of the California State Medical So-iety.*—During the late session in San Francisco, April 19th, ne following were elected for the ensuing year:—President, r. Ira Oatman, Sacramento; Vice-Presidents, Drs. W. S. horne, San Jose, Wm. F. McNutt, San Francisco, R. K. eid, Stockton, and R. H. Plummer, San Francisco; Treas-rer. Dr. F. W. Hatch, Sacramento; Permanent Secretary, r. S. W. A. Briggs, Sacramento.———*Revised British harmacopœia.*—The British Medical Council has appointed committee of three pharmacists to prepare a new edition f the Pharmacopœia. It is proposed to omit three drugs nd add twenty-nine. The edition will be assimilated to the J. S. Pharmacopœia, so far as substituting the use of pro-

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portional parts for specific weights and measures.———*Concentrated Aqueous Extract of Pinus Canadensis*, as formerly prepared by Dr. S. H. Kennedy, and now furnished by Messrs. Richardson & Co., of St. Louis, was first brought prominently to the attention of the profession for a large number of uterine troubles by the immortal Sims. Since then, it has been used by the mass of the profession generally with most excellent results. The wonder with us is that it is not carried in the pouch of every gynæcologist. We have been specially reminded of its value by a note in the June number, 1883, of the *American Medical Journal*, by Dr. George C. Pitzer, Professor of the Theory and Practice of Medicine in the American Medical College, of St. Louis. He recommends, as a local application for *ulceration of the os uteri*, per speculum, the following: ℞—S. H. Kennedy's Concentrated Aqueous Extract of Pinus Canadensis (dark), one teaspoonful; warm water, one tablespoonful, mix. Saturate a wad of cotton with this solution, and while the speculum is in place, introduce the wad through it, and be sure that the medicated cotton is placed firmly upon the ulcerated and inflamed os, and leave it there. This application may be repeated daily. As improvement takes place, the solution can be made weaker. It is astonishing how rapidly vaginal and uterine inflammation subside under this plan of treatment. Tender parts grow less sensitive; itchings and smartings are relieved; polapsus disappears in many cases; leucorrhœas are cured, and a general change for the better is enjoyed. Dr. Pitzer uses one of Stauffer's specula, with hollow bulb conductor, stem and check wheel in making the applications. That the medicated cotton may be placed firmly upon the ulcerated and inflamed os, put the hollow bulb conductor into the speculum, and with this push the cotton entirely through the speculum and against the uterus. Then carefully withdraw the instrument, leaving the medicated cotton in place.———*Dr. Edward Warren*, Bey, of Paris, has been made an "Officer of the Order of the Redemption of Jerusalem," in recognition of his skill and success, and as a reward for many humane acts———*The First Lady Doctors of London University.*—On Presentation Day, in May, 1883, Dr. Garrett Anderson, the Dean of Henrietta Street Medical School—herself twenty-one years ago an unsuccessful candidate for admission to examination because of the opposition then to the graduation of females in medical studies—presented Mrs. Scharlieb and Miss Shove to the Chancellor, Lord Granville, upon whom were conferred the

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ıedical and surgical degrees of the University. These ladies njoy the distinction of being the first females who have ob-ained degrees at the University of London. Mrs. Scharlieb ill go to Madras. Miss Shove has been appointed to the ıedical charge of the women who work in the General Post-ffice.———*Bromidia.*—Dr. H. H. Powell, Professor of Ob-etrics and Diseases of Children in the Cleveland (Ohio) edical College, after quite frequently using this prepara-n, thinks "highly of it as a hypnotic, especially for chil-en." He began its use in his own family, and soon appre-ted its value. "It acts promptly, producing refreshing ep, without suppressing the secretions, or followed by the quent disagreeable after-effects of opium."———*Dr. M. James* has been elected Dean of the Faculty of the Medi-College of Virginia—Dr. McCaw having resigned. Un-Dr. James' energetic hand, we confidently look forward success of the College.———*Dr. John W. Mallet*, Pro-sor of Chemistry in the University of Virginia, we regret learn, has resigned his chair to accept a similar one in the iversity of Texas. No one is more thorough in knowl-ge of chemical science or more gifted in power to impart truction. Texas gains a great deal; Virginia loses very ch by his removal.———*New Medical Journal in Rich-nd.*—Rumor has it that a new medical journal is to be be-n in this city under the special favor of the Medical Col-e of Virginia. Our personal knowledge of one of the ntlemen mentioned in connection with its editorial staff uld be a satisfactory assurance of the able conduct of its ntific department. We sincerely hope that a success not etofore experienced will crown every effort to advance true interests of this College.———*The Baltimore Medi-College*, started two years ago, has abandoned the co-edu-on of the sexes—a woman's medical college having been ted in that city. It has added sanitary science, insanity, out door clinic, etc., to its curriculum. It makes a good liminary education a pre requisite, and its sessions are en and a-half months each. Out of twenty-six candi-es for graduation, only twenty were able to pass examina-s last session. The object is to be thorough—not to make ny doctors, but good and competent ones.———*Politics Medicine—Explanation.*—Curiously enough, we have more n once been asked to define our political position because our editorial some months ago regarding the Medical llege of Virginia. Some malicious influence, it seems, is newhere at work against the editor of this journal because

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of that editorial; and at the suggestion of some friends, we once for all give the lie to any insinuation coming from a party who personally knows us that implies that we have in any degree changed our well-known political convictions, and none in this community would have the audacity to assert in our hearing that such was the case. For the benefit of those who do not know us and who may be interested on the subject and for whose special information we pen this sentence, we add that from the inception of the "Coalition Party of Virginia," we have had no sympathy whatever with or for it; and no proper occasion for the assertion of one's political views has escaped us, so far as we are aware, that we have not advocated the cause of the respectable Conservative political party of the State. While we regret the necessity of referring to our political views in a medical journal, we trust that, since the necessity has arisen, no one will hereafter have a doubt on the subject. But in our medical relationship to society, we purposely discard political or sectarian expressions, and try, in our editorials, to present those views which we believe to be right in general, and for the good of the profession in particular. We thought it to be to the true interests of the College and to the profession of this State to advocate a reformation of the Board of Visitors of the Medical College of Virginia, which is a State institution and not a private corporation. The Board showed for some years past but little interest in the special object of their trust. But we hope the recent agitation of the subject will result in good to the College. We shall continue to do all in our humble way to promote its true interests so long as it belongs to the State—whether we receive its patronage or not. Our personal political or sectarian views, however distinct and positive they may be, as they have ever been, shall not influence us in urging medical reformation whenever we are dispassionately convinced that such ought be made. In discussing medical topics, we shall try to rise above the level of political preferment, whether Republicans or Democrats are in Legislative or Gubernatorial power. In being displaced a year ago, *on account of our politics*, from the position of Acting Assistant Surgeon for this Port of the United States Marine Hospital Service, we have no regret to express other than the humiliating concession that that branch of the medical department of the U. S. Government should have descended so low in professional esteem as to allow simply the political complexion of its medical officers in this State to be a cause for their displacement.

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Original Communications.

ART. I.—**Antisepsis in Ovariotomy and Battey's Operation—Eighteen Consecutive Cases—All Successful.*** By ROBERT BATTEY, M. D., Rome, Ga., Fellow of American Gynæcological Society; Member of American Medical Association; Ex-President Medical Association of Georgia; Honorary Fellow of the Obstetrical Society of Edinburgh, of the Medical Society of Virginia, of the Abingdon Academy of Medicine, of the Augusta Medical Society, etc.

The extraordinary results obtained in Great Britain within the last few years in ovariotomy and in Battey's operation, induced the writer to avail himself of the opportunity offered two years ago, by his attendance upon the meeting of the International Medical Congress in London, to make a thorough investigation into the methods by which these results have been obtained. Since his return home he has endeavored to put into practice such of his observations abroad as he deemed of especial value. The striking improvement in the success of his operations has been most gratifying, and he is induced to offer them to the profession of his own section for their encouragement in this line of study and labor.

*This paper was prepared for the Medical Association of Georgia, but was not presented on account of the unavoidable absence of the writer.

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Case I.—Double Ovariotomy.

Aged 32; married, one child; health excellent up to the appearance of the tumor two years ago; never tapped; fine physical development, and superior mental culture. Multilocular cyst of the left ovary weighing 40 pounds, and small cyst of the right ovary of a few ounces; both removed. There were very extensive parietal and omental adhesions of a firm character, and a section of small intestine likewise adherent. Thirty-six carbolized silk ligatures were used to control hæmorrhage from the separated surfaces, and the oozing was still so considerable as to necessitate the expedient of Dr. Gilman Kimball, of Massachusetts, of bringing the inner surfaces of the abdominal walls in contact by quilled sutures passed far back from the line of incision in such manner as to leave a great roll of the approximated walls, like a Bologna sausage, up and down the abdomen. The pedicles were ligatured with carbolized silk and dropped free into the pelvis; a drainage-tube was lodged at the lower angle, and the wound closed by sutures of the same material. The spray was used, the instruments and sponges kept in carbolic solutions, and the wound dressed antiseptically. So heroic did the operation appear to the by-standers, none but the operator had any hope of her when she was put to bed. She however rallied well and went on from day to day to a slow but assured recovery.

It was interesting, when, upon the third day, the deep sutures were removed, to see the great roll of tissues lying up and down the abdomen gradually unfold and disappear as the approximated peritoneal walls slowly separated from each other and all became flat.

She recovered perfect health; had no return of the menses, which had been regular and quite profuse; and the following summer, educated lady as she was, she labored with her own hands in the cotton field, under our tropical sun, to aid her husband in securing a small honorarium for the surgical service.

Drs. Williams, Pearce, Allen, Huger, and Lovelace were present at the operation.

Case II.—Double Ovariotomy.

Single, aged 22. This poor girl was brought to me by her widowed mother in deep distress and mortification. She was the orphan child of a Confederate soldier who had died upon the battle-field in our late war, leaving his dependent family to the cold charity of the world. How poorly was he

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uited for the sacrifice of his life! When the tumor an to enlarge her abdomen, the gray heads around her ded significantly to each other, and soon the finger of rn was pointed at her from every hand.

When brought to me, fatigued by her overland journey, was much enfeebled. The pulse was 150 to the minute the temperature 103.5° F. The abdomen was greatly rged and quite sensitive to the touch. The outlook did seem at all encouraging. Reflecting a little upon the , I became satisfied that the untoward symptoms were to inflammation of the cyst, and in place of waiting in the hope of a better state of things, I made haste to remove tumor with antiseptic precautions. The event amply ified the decision, for the pulse and temperature began at e to go downward, and she made a rapid and complete very. The cyst of the right ovary weighed 30 pounds; left ovary with a small triple cyst was also removed. re has been no subsequent menstruation.

rs. G. W. and J. B. S. Holmes and Lovelace assisted in operation.

E III.—Battey's Operation.

ingle, aged 25. She had been ten years an invalid—h of the time in bed. She suffered constantly with pel- pain, at times of an agonizing character, and accom- ied by epileptiform convulsions. Both ovaries were re- ed with antiseptic precautions, through an abdominal sion. One of the ovaries was much enlarged, and con- ed several small cysts. Her recovery was uninterrupted. hree months after, she writes that she walks miles every . Having so long been deprived of the power of loco- ion, she now finds in walking her highest enjoyment. he late Dr. George F. Cooper assisted at the operation. re has been no return of the menses.

E IV.—Battey's Operation.

larried 16 years; aged 36; no children. Long a martyr öphoralgia, with great nervous disturbance, and a con- ed opium habit. Notwithstanding her great and con- t suffering, she has become quite fleshy. So thick were abdominal walls, it was deemed best to seek the ovaries he vaginal route, as they seemed quite accessible by that ction; antiseptic precautions were used, as far as is prac- ble in that method of operating. The ovaries were re- ed cleanly and with facility. The recovery was as

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prompt as could be desired, and the menopause complete. But thus far it has been impossible for her to summon her resolution sufficiently to grapple with the opium habit, which she still continues. Her neuralgias still trouble her, but in much less degree, and doubtless she will continue to do so until she can nerve herself to abandon morphia.

Dr. Greer assisted me with this operation.

Case V.—Double Ovariotomy.

Married, aged 32; four children. Tumor observed two years ago in left side of the pelvis; tapped a year ago by aspirator, 56 ounces. The abdomen is full and tense, projecting boldly forward. Tumor very fixed, dips down in Douglas' pouch. The os uteri is high up above the pubis, suggestive of uterine tumor. The *facies ovariana* is very marked; quite thin in flesh but has good appetite, clean tongue and regular bowels. The uterine sound enters the cavity of the uterus five inches. I proposed an exploratory incision to perfect the diagnosis and to see if it be possible to remove the tumor, frankly telling her, at the same time, that I would be glad if she would decline even this and return to her home. She was fully committed to the operation and bravely determined to make a bold strugle for her life.

With my usual antisepsis, an incision was made and afterwards extended quite to the umbilicus. The uterus was found in front of the tumor, greatly elongated—drawn out, as it were, like a piece of molasses candy—more than halfway to the umbilicus. The tumor involved the left ovary, was adherent to the omentum, to the posterior wall of the uterus, to the left Fallopian tube, to the sigmoid flexure of the colon, to the rectum and to the left pelvic wall. The adhesions were separated; a good pedicle was found, ligatured with carbolized silk and dropped back. The cyst weighing 30 pounds, consisted of one principal sac containing three gallons of thick, greenish-brown stuff like dense molasses, and several other sacs, varying in size from that of a large orange to a walnut, with greenish, gelatinous pus. The right ovary, degenerated into a collection of gelatinous cysts as large as an orange, was also removed. Twelve carbolized silk ligatures were used upon the divided adhesions, and the same material was employed for ligatures and sutures throughout. She was put to bed in forty minutes, in capital condition; the pulse was full and good.

Drs. G. W. Holmes, J. B. S. Holmes, Lovelace, McCurry, H. H. Battey, T. M. Holmes, and West assisted.

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On the twentieth day she was dressed and about the house as usual, and upon the twenty-fourth day returned to her home in Alabama sound and well. I saw her six months afterwards in perfect health. There has been no return of the menses.

CASE VI.—**Battey's Operation.**

Married, aged 35; three children. Chronic uterine disease for ten years, with oöphoralgia, which has resisted all treatment. Nervous system much shattered. Both ovaries mainly removed by antiseptic laparotomy. The operation was done with great facility and lasted but fifteen minutes. The ovaries were both diseased.

Drs. G. W. and T. M. Holmes, and H. H. Battey assisted. She made a rather slow but sound recovery. After the lapse of twelve months she is greatly improved every way, but is not entirely well yet. The menopause is complete. She will continue to improve for a year or two more.

CASE VII.—**Battey's Operation.**

Married, aged 26; no children. For some years she has been the victim of oöphoralgia and hystero-epilepsy. Both ovaries removed by antiseptic laparotomy, in St. Joseph's Infirmary at St. Paul, Minn.

Drs. Marcy, of Boston, Nelson, of Chicago, Norton, of Detroit, Munn and Haskell, of St. Paul, were present; Dr. Marcy, a pupil of Mr. Lister, kindly superintended the antisepsis.

The ovaries were enlarged and altered in structure; the left Fallopian tube was much inflamed, enlarged, somewhat convoluted, and from the fimbriæ depended, by a slender pedicle, a beautiful pellucid cyst one inch in diameter. The tube was removed. The patient made a slow recovery. In three months she was much improved; the menses continued but without pain. When last heard from, the time was too short to indicate final results.

CASE VIII.—**Battey's Operation.**

Single; aged 26; inmate of the Alabama Insane Hospital; ovarian insanity aggravated by the menstrual paroxysms—nymphomania. The ovaries were removed by antiseptic laparotomy in presence of Drs. Bryce (Superintendent of the Institution) and Searcy and the hospital staff. Doubts were expressed of the efficacy of the operation as to the nymphomania, as experience had proved that the sexual sense is not removed with the ovaries; but it was hoped to restore the

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mental balance by arresting the monthly paroxysms, and that the sexual erethism might be controlled by the balanced intellect. The rapidity of her recovery, without an untoward symptom, was matter of surprise to Dr. Bryce, who watched her convalescence.

Dr. B. writes, of recent date: "I am glad to be able to give you an encouraging account of * * * * on whom you operated a year ago. I believe I told you the wound healed rapidly, without a single untoward event—without pain or fever. I am glad now to tell you that she has been gradually improving, both in mind and body, ever since the operation, and I trust will soon be able to return and live at home with her parents. I would have sent her home before this, but for the fact that she suffers occasionally from the most tormenting * * * * and is afraid to trust herself away from the restraints of the hospital. But for this condition, she could have returned home months ago. In proper cases, I think a great deal of Battey's operation, but it requires *time* for the development of its best results."

Case IX.—Double Ovariotomy.

Married; aged 44; one child, aged 22. No subsequent pregnancy. The tumor had existed more than nineteen years. She had been three times tapped and the case pronounced, by good authority, to be chronic ascites. She was much emaciated; the *facies ovariana* very marked. The abdomen was greatly distended, flattened, and gave a dull percussion sound everywhere, and fluctuation was marked throughout, not to be distinguished from advanced ascites. By repeated examinations the differential diagnosis was made satisfactory, and an operation confidently advised. This was done antiseptically, Drs. Green and Johnson, of Talladega, and H. H. Battey assisting. The tumor weighed nearly fifty pounds—a very thin-walled cyst of the right ovary, free of adhesions and with a good pedicle. The left ovary being cystic, as large as a goose egg, was also removed.

When the tumor had been lifted out, Dr. Green, looking down into the empty abdomen, asked, with evident surprise, "Doctor, where are her bowels?" The question seemed a pertinent one, for the intestines were nowhere to be seen; the cavity was as clean and empty as that of a slaughtered hog hanging in a butcher's stall. When the wound was closed, the lax abdominal wall lay upon the lumbar spine. The patient rallied well and went smoothly on to an assured and perfect recovery, without a single drawback. It was

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everal weeks before the intestinal mass came down from s hiding place beneath the ribs to fill the vacuum in the bdomen. The general health was perfectly regained, the enopause was complete, and she took on flesh to the extent f forty pounds, with a new lease of life and happiness.

ASE X.—Battey's Operation.

Married; aged 28; two children. Abortion in 1875, fol-wed by metro-peritonitis of a violent type. In 1881, she as down six weeks with pelvic peritonitis. She complains f constant pain in the left ovary which nothing removes, nd which is aggravated by the menses; the latter recur at ntervals of three weeks and are quite profuse. She is re-uced in flesh and much broken down by her sufferings. oth ovaries were removed by antiseptic laparotomy, in the resence of Drs. Holmes, Hunt and H. H. Battey. Both varies were diseased, and the tubes being firmly adherent ere likewise removed. A floating kidney in the right side as not disturbed. The sufferings of the patient had led er to contract a moderate morphia habit, and one-grain oses were required to quiet the nerves. Her recovery was little tardy, but she returned home comfortable on the irtieth day.

ASE XI.—Battey's Operation.

Single; aged 19; menses at 13; always irregular and ainful. For three years she had been confined to bed, nable to sit or stand, on account of pelvic and sacral pain. here is much pelvic tenderness as well as at points along e spine. The pelvic pain is intensified at her periods, hich recur at intervals from five to eight weeks. Local eatment of the uterus for two years has not improved her. he requires morphia daily. Both ovaries removed by anti-ptic laparotomy. Drs. G. W. and T. M. Holmes, Lovelace nd H. H. Battey assisting. Both ovaries were cystic as well s the parovarium.

She made a good recovery; the maximum pulse 108, and mperature 100.6°. The eventual result is not yet devel-ped; so demoralized is her nervous system, the restoration ust be slow.

ASE XII.—Battey's Operation.

Single; aged 25; ten years an invalid; last two years uch of her time in bed. She has borne her sufferings he-ically, and has not abused opium. The right ovary is

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much enlarged, and has been for years extremely tender and the seat of constant pain. Both ovaries removed by antiseptic laparotomy, in the presence of Drs. G. W. and T. M. Holmes, H. H. Battey and Mrs. Battey. The ovaries were both adherent to surrounding structures, both enlarged and cystic; the right one, as large as a hen's egg, contained a cyst which was ruptured in manipulation, and its contents, of a chocolate-brown thick stuff, escaped into the pelvis. Two pellucid cysts of the tubes were also removed. The pelvis was cleaned out and a rubber drainage-tube lodged at the lower angle of the wound; carbolized silk used throughout. The maximum pulse was 110, temperature 101.4° F.

The recovery was prompt and complete—indeed, she seemed to rebound like an India-rubber ball, and pass immediately from her bed of languishing to a state of robust health and perfect happiness. In three months, she was able to distance my own rosy and vigorous daughter in a foot-race of fifty yards, and in six months could walk three miles with ease and comfort. How is it that a member of the Obstetrical Society of London can, in debate, pronounce Battey's operation "a detestable proceeding," in precisely this class of cases? Could anything be more satisfactory, more beneficent? The menses have, curiously enough, continued regularly, but entirely free from suffering.

Case XIII.—Single Ovariotomy.

Married; aged 22; confined a year ago of an only child, which perished in a few days. She "did not go down" after her confinement as she should have done, but continued to enlarge. For a year prior to confinement, she had made frequent complaint of pain in region of *left* ovary. She was tapped five times—the first on 10th April, 1882, and last on 19th December, 1882. The cyst fills more rapidly after each tapping, and the average amount drawn at each sitting is two and a half gallons. After tapping, a moderate sized mass of solid material is left in the pelvis; this is free, and can be pushed upwards above the pubis. She is quite full now (January 14th, 1883); the abdomen projects strongly forward, the mobility is wanting and parietal adhesions are suspected. The general health is fair, tongue furred, appetite poor, bowels well opened. The pulse is remarkably quick and small.

I was invited by my friend Prof. Westmoreland, of Atlanta, to operate on this case, and the tumor was removed

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with his assistance with antiseptic precautions. Drs. Fitts and Cole, of Carrollton, were present also. The tumor proved to be of the right ovary, although the pelvic pain had been always upon the left side. Parietal adhesions, of say eight square inches, were separated in the umbilical region. There were also omental adhesions and others to the left iliac parieties; the pelvis was free. The tumor consisted of a large cyst of two and a half gallons capacity, a smaller cyst of half gallon, and numerous still smaller cysts at the base, filled with colloid material. Within the large cyst, and in its left wall, was found a mass, perhaps a pound and a half in weight, of mingled colloid and encephaloid looking material—evidently ovarian cancer. It was situated quite two and a half inches from the point of separation, and was completely removed.* The pelvis was well sponged out and the abdomen closed with carbolized silk without drainage-tube. She rallied well, was very comfortable, but with the small, quick pulse before observed, slight nausea and moderate thirst. At 8 P. M., the pulse was 120 and temperature 101.5° F.; sleeping quietly; thirst, but no nausea. When I left her at 5 A. M., the pulse was 130, quite small and weak; temperature 101°; comfortable and sleeping well under moderate opiate. She made a rather slow recovery, but regained her health fully.

CASE XIV.—**Battey's Operation.**

Single; aged 25; ten years an invalid, with intense ovarian pain, which has confined her to bed entirely for four years. She has exhausted every resource within her reach, and completely worn out her physicians and her friends; has contracted a confirmed morphia habit. Both ovaries were antiseptically removed by laparotomy, assisted by Drs. England, Richardson, Harris, Liddell and Chisolm. The right ovary, which had been the chief seat of pain, was enlarged to thrice its normal dimensions; the left was also enlarged, and both were cystic. The left tube being cystic, was also removed. She made a good recovery without complication. The menopause is complete, and the cure progressing as satisfactorily as could be expected. The nervous system has been sadly demoralized, and time must necessarily elapse before the full results can be looked for.

*This form of cancer, if completely extirpated, does not, in general, return either in the pelvis or elsewhere.

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Case XV.—Battey's Operation.

Single; aged 30; suffered fifteen years with dysmenorrhœa and oöphoralgia; nervous system much broken down; thin and emaciated. She spent some months with Dr. Marion Sims, in New York, who incised the cervix with but partial relief, and diagnosticated chronic oöphoritis of the right side, and advised Battey's operation if the trouble persisted. As her complaint is only of the right ovary, she exacted of me a promise to leave the left if I should find it healthy, which promise I gave her reluctantly, as it is in opposition to my judgment and experience. The uterus is small; slightly retroverted; not tender; no leucorrhœa. She has been for years bed-ridden, but not enslaved to opium; tongue clean; bowels regular; appetite poor. Both ovaries removed by antiseptic laparotomy; assisted by Drs. Holmes, Wells and H. H. Battey. The ovaries were free, and the tubes healthy. The right ovary normal in size, but much corrugated; covered by a thick, tough tunic of a dirty white hue; contained a ruptured follicle of apparently two or three weeks, and three small cysts, one of which burst in removal. The left ovary was one-half larger in size, with a similar tough corrugated tunic, a recently ruptured follicle discharging dark grumous blood; also five cysts. Recovery uninterrupted; temperature did not exceed 99.8°, and for only a few hours did the pulse go above a hundred. The menopause is complete, but the operation is too recent to develop the final results.

Case XVI.—Single Ovariotomy.

Married; aged 43; no children; miscarriage ten years ago. She has carried the tumor three years; is much broken down; greatly dispirited, and altogether wretched. Diagnosis, ovarian cystoma; uterus is in front, and elevated above the pubis; cavity five inches; can detect no uterine tumor, and the enlargement of the cavity is not explained. May it not be drawn out by adhesion, as in Case V?

Assisted by Drs. H. H. Battey, Lovelace, Hammond and Tigner, the tumor was removed with antiseptic precautions. The ether produced cough, and the trachea was embarrassed by accumulated mucus. The tumor was unattached, except to the right horn of the uterus, lifting the organ out of the pelvis and elongating it. There was one large cyst containing a thick, translucent albuminoid stuff like castor oil, with several small gelatinous cysts below. The left ovary was sound, but atrophied. The convalescence was rapid; no

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r; no pain; did not require opiates at all. She returned e by rail on the twenty-first day. Three months after reports herself feeble and troubled with her eyes.

XVII.—Battey's Operation.

ngle; aged 25; has been for ten years a sufferer with ian dysmenorrhœa. For four years past, the paroxysms become much intensified and recur repeatedly in the val of menstruation, requiring steadily augmented doses orphia. The hymen was dilated and the uterus found tu and healthy; the ovaries extremely sensitive.

ssisted by Drs. G. W. and J. B. S. Holmes, Lovelace, t and H. H. Battey, both ovaries were removed by anti- c laparotomy. The right ovary was more than double contained a recently ruptured follicle and two cysts h gave way in their removal, and discharged a yellow d. The left ovary appeared normal, and contained also ently ruptured follicle. The tubes were healthy, and left undisturbed. The recovery was prompt and good, r as the operation was concerned, but, from certain idio- rasies of the patient, difficulty and delay were encoun- l in unloading the bowels; her secretions became de- ed, and in the fourth week she became somewhat jaun- l. There was no trouble whatever with the wound or elvis. The arrest of all pelvic pain has been prompt complete. She has passed two periods without men- l sign, and the outlook is as bright as can be for the re, though she has yet to bear the test of time.

is promises to be one of the cases which bound at once agonizing pain into complete ease and comfort.

XVIII.—Single Ovariotomy.

arried; aged 54; no children; changed life at 50; good h always until six years ago, when she began to expe- e pain in the left ovary, which has continued since; no in the right side. About the "change" she began to rge. June 6th, 1882, she was tapped—three and one- h gallons of straw-colored liquid. Again tapped De- ber 8th; half gallon only obtained.

here is a large cyst which occupies the abdomen from to side, and bulges the short ribs; fluctuates freely. A ler cyst below occupies the hypogastric region; abdo- dull everywhere on percussion. In the pelvis, there is uation and but little solid material. The uterus is atro-

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phied and pressed backwards into the hollow of the sacrum; no evidence of adhesions.

Antiseptic ovariotomy was done, assisted by Drs. Holmes, H. H. Battey and West. A half pint of serum escaped on opening the abdomen; a thirty-pound tumor was removed with facility, consisting of one large cyst above and a smaller one below; no adhesions, and but little solid material; pedicle of good length and thin, sprang from the left side. The right ovary was healthy, but atrophied. There were two small sub-peritoneal fibroids springing from the uterus, which, although inviting removal, were not interfered with. There was no shock; the convalescence was only eventful in the remarkable absence of pain or fever; no medicine was required; not even a dose of paregoric. Only once did the pulse exceed 100, and the maximum temperature was 99.8°. She slept much of the time by day as well as by night during the first ten days, but it was natural sleep.

Remarks.—It will be seen from the brief history given that these cases were for the most part favorable ones, but not without complications. They were not selected at all, but each case was operated upon as presented.

The antisepsis was not strictly Listerian. It consisted in the use of the spray by a very superior German silver instrument, long used by Mr. Lawson Tait, of Birmingham, England, who was kind enough to offer it to me on my visit to him in 1881, that I might "bring it to America just to show how not to do it," as he pleasantly remarked. I find this atomizer an admirable apparatus; it throws an ample spray to a long distance, and will maintain it for two hours. I use a two-and-a-half per cent. solution of carbolic acid, and the same for instruments and sponges, which are kept constantly immersed. Carbolized silk is alone used for ligatures and sutures. Precaution is observed that only clean and pure hands touch the abdomen. The greatest care is used in the purification of instruments and sponges. The wound is dressed with carbolic cerate surmounted by a mass of loose raw cotton and flannel bandage.

It is a notable fact that since my last visit to Europe, the success of these operations in my hands has markedly improved. Why is this? In looking the ground over, I find myself at a loss to attribute the gain to any one thing. With-

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entering upon the discussion of the vexed question of terian influences, it is a well settled fact that a good, pure iosphere is a most valuable aid to successful surgery. An ervation of thirty-five years in this mountain region of orgia, has fully satisfied me that wounds of all kinds, hout antiseptics, heal with a promptness and absence of nplications which I have nowhere else observed, either in nerica or in Europe.

t has been my habit, and still is, to lay aside the so-called ignity of the profession," when occasion arises, and to e hold with my own hands and assist in the nursing in and every way that the safety of my patient may require. Experience and skill in this operation certainly should ve high rank in estimating the chances of success. To ther of these, however, can the sudden and marked altera- n in my results be attributed. I am myself inclined to k first to the observance of *extreme cleanliness* in hands, truments, sponges, bedding, furniture, etc.; second, to discarding of the écraseur as an instrument full of crev- s for the lodgment of filth, very difficult to clean and full danger to the patient; thirdly, the use of hæmostatic for- os which materially shorten the time of operating, save ood and lessen shock.

Of the spray and the use of carbolic acid in general, whilst hink it has been pretty clearly shown by Keith, Bantock d Tait that neither is essential to the highest success, and nen strong may even prove poisonous to patient and sur- on, I feel assured that weaker solutions do no harm, and ink they may serve to guard the patient against any slight nperfection in the details of cleansing. Quite sure am I at my own results, with the acid and the spray, are now as ood as I could desire—let those who can get the same re- lts without these aids do so. For myself, I am content to old them as valuable assistants until their utter uselessness as been more conclusively shown.

My experience has been uniform upon one point, namely: When I have yielded to the solicitation of a patient and ope- ated at her distant home, leaving her in the hands of her

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family physician, the convalescence has been unduly slow and not satisfactory. In a few cases, they have gone beneath the sod when I could but feel that they might have been saved.

The friends of a patient are by no means the best nurses for an ovariotomy case. Whilst in England I was assured that no operator who had any character to lose would venture to stake it upon an operation to be done under such disadvantages. They all require their cases to come to them, and put them into the hands of their trained nurses.

ART II.—**The Training and Education of the Feeble-Minded, Imbecile and Idiotic.** By CHAS. H. STANLEY DAVIS, M. D., Meriden, Conn.

DEFINITION AND CLASSIFICATION OF IDIOCY.

The terms *idiot*, *imbecile* and *feeble-minded* convey a meaning readily understood, and the word idiocy, or some equivalent term, is to be found in the languages of all civilized nations. The word is derived from *idios*, being deprived of something. The Italians use the word *idiotismo*. Pinel and some other French writers use the word *idiotism*. Vogel, Saúvages and others speak of *idiocy* under the Latin terms *fatuitas*, *imbecillitus*, *amentia*, while Esquirol and the majority of modern writers use the word *idiocy*.

The term *idiot* is applied to that class of persons whose intellectual development was arrested owing to mal-nutrition or disease of the nervous centres occurring before birth, or before the evolution of the mental faculties in childhood, and is usually associated with some cranial malformation.

Esquirol * was the first medical writer who very clearly defined the term and restricted it to a congenital defect. "Idiocy," he observes, "is not a disease, but a condition in

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* *Observations pour servis à l'historie de l'Idiotic. Dans les Maladies Mentales.* Paris, 1828.

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which the intellectual faculties are never manifested; or have never been developed sufficiently to enable the idiot to acquire such an amount of knowledge as persons of his own age, and placed in similar circumstances with himself, are capable of receiving. Idiocy commences with life, or at that age which precedes the development of the intellectual and affective faculties, which are from the first what they are doomed to be during the whole period of existence."

When this was written idiocy was classed as a division or species of insanity, and it was thought impossible that an idiot's intellectual faculties could be improved.

But, the education of this unfortunate class has, in modern times, so far modified its correctness, that it is no longer right to speak of the faculties of the idiot being doomed to remain stationary, or to say, as Esquirol proceeds to do, "the condition of a man in a state of dementia may change—that of the idiot is ever the same."

Griesinger* defines idiocy as follows: "It is beyond doubt that the weakness of the intellect, and therewith the arrest of the psychical development, depends upon a cerebral anomaly. This fact is, in general, much more capable of being directly proved and demonstrated than in other mental diseases. In many cases of idiocy there may be observed considerable pathological changes in the brain or its membranes, on an average much more so than in mental disease in the restricted sense, and we can, in general, say, supported by the great majority of cases, that the deficient mental development is the direct result of deficient cerebral development in childhood, and that it is in proportion to it. Nevertheless, evident and palpable changes in the brain or its membranes are not always found in idiocy, and we are compelled, by numerous facts, to the assumption that there are also idiotic states where the weakness of perception does not depend upon organic changes, but originally upon a simple functional anomaly of the brain. To this class many cases ought to be referred, where frequent epileptic attacks in very early life, or where onanism, commenced at a very

* *Mental Pathology and Therapeutics*, p. 348.

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early period, have induced an early exhaustion of the cerebral functions; others, where long general illness in a child, with impairment of the nutrition of all the organs, included the brain, and therefore the due performance of its functions; further, cases where the mental development remains stationary from want of any external mental impulse, from neglect and inattention, association with other elements, unfavorable outward relations, etc.; finally, certain cases where the mental development does not progress, because in weakly children there exists such an excessive degree of emotional irritability, of timidity and fear, that a state of passionate excitement is awakened by every attempt of mental influence, even by any lively sensorial impression, so that development of the normal process of perception is rendered impossible. Although few of the latter cases originally belong to the idiotic states, still they have the same practically important result—arrest of mental development. But these cases of merely functional cerebral disorder, which at the commencement constitute a more apparent dementia, form a very small minority compared with the cases where the psychical disorder is the result of organic changes in the brain."

Esquirol divided the feeble-minded into two classes—*imbeciles* and *idiots*. The word imbecility is generally used to denote a less decided degree of mental incapacity. The physical organization is more or less perfect; the intellect and sensory organs are somewhat developed; and the affections, passions, desires, ideas and memory exist, but only in a slight degree. They think, feel and speak, and are capable of acquiring a certain amount of education.

Hoffbauer divided imbecility into three classes, according to the extent to which the mental faculties are impaired.

In the *first*, the individual is incapable of forming a judgment on a new subject, however simple it may be. He can judge very well, however, regarding subjects which are familiar to him; his memory is, of course, very weak, although he observes a certain routine of occupation with scrupulous exactness. He is not accustomed to talk much of himself. He is liable to sudden paroxysms of anger.

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The subject of the *second* degree is even less able to judge and act, in regard to his accustomed occupations. He is exceedingly confused, in regard to the place in which he is and the person with whom he converses, and is very generally at fault in regard to his ideas of time.

In the *third* degree of imbecility, there is more reason to apprehend danger from the individual affected with it; for he has delusions of the evil intentions of others, and is not only passionate, but suspicious and misanthropic. He frequently talks to himself. Thinking aloud, however, is no proof of imbecility.

Dr. Maudsley * speaks of imbecility as follows: "Imbecility is simply weakness of mind, owing to defective mental development, and may be of every degree of deficiency, moral and intellectual; on the one hand passing by imperceptible gradations into idiocy, and on the other hand passing insensibly into ordinary intelligence. There are some imbeciles in whom a general deficiency of intelligence is accompanied by a singular development of it in a special direction; they manifest, for instance, a surprising memory for details, such as dates, names, numbers, the exact particulars of distant events, which they recall and recount with the greatest ease and accuracy, or display certain remarkable mechanical aptitudes, or exhibit a degree of cunning which might seem inconsistent with their general mental feebleness. Idiocy is a defect of mind, which is either congenital or due to causes operating during the first few years of life, before there has been a development of the mental faculties, and may exist in different degrees; the person affected with it may have the power of articulate speech and manifest a limited degree of intelligence, or he may be utterly destitute of any semblance of intelligence and of the power of speech, being little more than a vegetating organism."

Between idiocy and simple imbecility we find all possible grades of physical and mental development. By many writers idiocy and imbecility have been regarded as pathological generalizations, incapable of further subdivision. It is true that there are no accurately distinctive symptoms

* *Responsibility in Mental Diseases*, p. 65.

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which clearly separate the classes, but each presents its connecting links in cases which resemble, in their peculiarities, those of the classes above and below.

There have been numerous definitions and classifications of idiocy, and we present briefly some of the most important ones.

The first scientific classification of idiocy was made by Dr. Seguin in 1846.* Prior observations had been made, chiefly upon adult idiots mingled with the mass of insane and demented in the public asylums. Dr. Seguin laid the foundation of his classification in the assumption that the mental and moral features of idiocy were dependent upon conditions of the nervous system.

The remote cause or source might be physiological or pathological; the immediate cause was in abnormal conditions, either of the central nervous masses or in the nervous apparatus radiating from those centres, and which connects them with the individual environments. He then speaks of the essential forms of idiocy:

1st. The chronic affection of the whole or a part of the central nervous masses, which is characterized as profound idiocy.

2d. A partial or total affection of the nervous apparatus, which ramifies through the tissues and presides over the life of relation, the result of which is superficial idiocy.

He also describes a class of cases under the head of *enfant arriéré* or backward children, in which there seems to be a mere functional torpidity of the nervous system. He is free from any disordered activity; uses his hands naturally, but with very little effectiveness; walks without defect, but without firmness or elasticity; presents no sensorial anomaly, but does not much use his senses to quicken his sluggish comprehension. When the idiot does not seem to make any progress, and when the ordinary child improves in the ratio of ten, the backward child improves only in that of one, two, three or five. This child may be, and is in fact, actually

* *Traitement Moral, Hygiene et Education des Idiots, etc.* E. Seguin, Paris, 1846.

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educated with the confirmed idiot; and there is no inconvenience, but advantage, in their being treated alike. *

Dr. Seguin refers at length to the many maladies with which the different forms of idiocy may be accompanied, which may be precursory, coincident or consecutive. He speaks of all such as accessory, but expresses the hope that others, with an accumulatiou of experience, may in time work out the problem of the relation or relations, if any exist, between the accessory maladies and the infirmity itself.

Psychologically, we may regard the idiot, with Dr. Seguin, as badly served by imperfect organs; the instincts limited, but imperious; sensation and reflex action taking the place of attention, comparison, judgment, memory, foresight and will. Says Hugh Miller: "Nature in constructing this curious organ first lays down a grooved cord, as the carpenter lays down the keel of his vessel; and on this narrow base, the perfect brain, as month after month passes by, is gradually built up like the vessel from the keel. First it grows up into a brain closely resembling that of a fish; a few additions more connect it into a brain indistinguishable from that of a reptile; a few additions more impart to it the perfect appearance of the brain of a bird; it then develops into a brain exceedingly like that of a mammiferous quadruped; and finally, expanding atop and spreading out its deeply corrugated lobes till they project widely over the base, it assumes its unique character as a human brain."

The process of development and growth of the brain of the idiot may have been arrested at some point between its rudimental and highest extremes. At whatever stage of organic development this arrest takes place, we should naturally expect a corresponding default in the performance of functions connected with the organ thus impaired. We have imperfect reflex actions and discordant movements. We have a want of spontaneousness of perceptions, of emotions, of thought, of action and of will. These deficiencies exist to a greater or less extent, according to the degree of

* *Idiocy and its Treatment by the Physiological Method.* By Edward Seguin, M. D., New York, 1866, p. 66.

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idiocy, or depending upon the point of arrest in the development of the nervous system. *

Esquirol based his division of idiots upon the power of speech they possess. In the first degree of imbecility, speech is free and easy; in the second degree it is less easy, and the vocabulary smaller. In the first degree of idiocy proper, the idiot can only use short words and phrases; idiots of the second grade only utter monosyllables or cries; in the third grade they neither use speech, nor phrases, nor words, nor monosyllables. Doubtless these divisions are mainly true to nature and practically useful.

Dr. H. B. Wilbur has written an interesting paper, amplifying Esquirol's classification. He says: † "From my experience, however, I should say that language and speech will ordinarily come with developing intelligence, even if special efforts are not made to call them out. That is to say, with a certain degree of intelligence and observation, the idea of language and a comprehension of its use will come as in the case of a normal child, only relatively to the intelligence a little more backward. So, too, with a certain degree of control over the physical organization, coupled with the desire of expressing desires and wants, speech will generally follow."

Another attempted classification is by an English physician, eminent in the treatment of idiocy, Dr. J. Langdon Down; it may be called an ethnic or physiognomical classification. ‡ Caucasians, Ethiopians, Malays, Mongolians, are all to be found, typified, according to Dr. Down, among idiots. Many of them are dwarfish, and have broad faces and squat figures, and a variety has been studied and described, offering some of the most striking features of the Tartar or Mongol.

The most common characteristics are:—The head is somewhat small and obtusely rounded; the antero-posterior and

* *Some Suggestions on the Principles and Methods of Elementary Instruction.* By Dr. H. B. Wilbur, Albany, 1862, p. 8.

† "The Relation of Speech or Language to Idiocy."—*Transactions of Amer. Association of Idiotic and Feeble-Minded Persons*, 1879, p. 75.

‡ "Observations on an Ethnic Classification of Idiots," by Dr. Langdon Down, in *Clinical Lectures and Reports of the London Hospital*, Vol. iii, 1866, p. 259.

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lateral measurements are nearly equal; the features are broad; the upper superciliary margin of the orbit is more oblique than usual, giving the upper slant to the outer droop of the arch of the eyebrows, so striking a feature in Chinese drawings; the inner eyelid comes down towards the nose with a more rapid slope; the bridge of the nose is flat, making the unusual distance between the eyes more readily noticed; the nose itself is short and premorse; the tongue is rough and backed; the figure is dwarfish and squat; the hands and feet are short and broad; the skin is of a slight dirty yellowish tinge, and is deficient in elasticity, giving the appearance of being too large for the body. This type occurs in more than ten per cent. of cases, and are always congenital idiots. *

Dr. Hack Tuke † proposes a classification which, not perhaps practically available, serves to mark different degrees of degeneracy.

First, Those who exhibit nothing beyond the reflex movements known as the excito-motor.

Secondly, Those whose reflex acts are consensual or sensori-motor, including those of an ideo-motor and emotional character.

Thirdly, Those who manifest volition—whose ideas produce some intellectual operations and consequent will.

Griesinger ‡ groups idiots in certain types.

1. Well-formed children, in whom the mental development, which remains at the lowest grade, is the only apparent defect, the defect not being dne to any hereditary, but to some accidental cause of degeneration.

2. The cases in which both bodily and mental development have been palpably arrested: these are the dwarfs in mind and body.

3. The Cretin, or basilar-synostotic type of idiocy or imbecility. Cretinism generally manifests itself a few months

* Cases of this type have been reported by Dr. A. Mitchell and Dr. Fraser, under the name of "Kalmuc Idiocy," in the *Journal of Mental Science*, July, 1876.

† *Manual of Psychological Medicine*, by Dr. J. C. Bucknill and Dr. Daniel Hack Tuke. Fourth Edition, London, 1879, p. 152.

‡ *Mental Pathology and Therapeutics*. Dr. W. Griesinger, London, 1867.

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after birth, and is frequently associated with bodily deformity and goitre; and it is supposed to be due to some miasmatic influence primarily affecting the growth of the bones of the skull. It is most common among the mountains of Switzerland, but is met with sometimes in badly-drained places, and now and then sporadically.

4. The Aztec type, consisting of the true microcephalic idiots.

5. The theroid idiots, who have a sort of resemblance to some animal.

Drs. Duncan and Millard* propose a classification as follows:

Class I.—True and profound idiots; solitaires.

Class II.—Having a slight amount of intelligence, being able to stand and walk a little and often capable of slight instruction.

In these two classes the affliction exists at birth, and there are malformations and disabilities of the parts of the body as well as deficiencies of the mental powers. They may be described as beings suffering from various functional disturbances, from perversion of special and common sensation, from paralysis of sets of muscles and from inability to coordinate many more or less complicated muscular movements to a common end.

Class III.—Able to walk, run, to use their fingers, to be made to attend slightly, to do easy mechanical work, and to feed themselves; memory and perception very weak, and variable in power. Their walking is defective in ease and grace; the voice is rarely or never perfect; the memory, intellectual perception, foresight, etc., are very defective and often absent. The power of abstract reasoning is generally wanting and seldom to be traced except in a very slight degree. Automatic movements are common.

Class IV.—Feeble-minded children, adolescents and adults. Cases higher than Class III in the scale of mental and physical power and reaching to the lowest class of intelligence found in perfect individuals. Many are born in the

* *A Manual for the Classification, Training and Education of the Feeble-Minded, Imbecile and Idiotic.* London, 1866, p. 12.

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Class I, and by growth and training emerge into this class. They all have more or less defective voices and powers of locomotion, a great want of foresight, common sense and power of self-management.

Class V.—Born with perfect intelligence and with the usual gifts of children. A state of mind like that of the classes already noticed has been produced by disease of the brain, by epileptic convulsions, by water on the brain, or by injury to the head. Malformation may, or may not exist, and the muscular powers with the ability to walk and speak are very variable in extent.

Class VI.—Resembling Class V, but the evidence of permanent disease of the brain exists in the form of epileptic seizures and paralysis.

Class VII.—Cases born with hydrocephalus, or in which the disease has been arrested after it has destroyed, more or less, the power of the brain.

Class VIII.—Cases of perfect individuals who have been educated and who have become debased in mind and body during youth from vice.

Drs. Duncan and Millard remark that there are no accurately distinctive symptoms which separate clearly the classes of congenital idiocy; there is a gradual progression in intellect and physical power from the lowest to the highest; yet the artificial and broad definitions submitted will be found useful. Each of the classes presents its connecting links, in cases which resemble, in their peculiarities, those of the classes above and below.

The last classification to which we shall refer is that of Dr. W. B. Ireland, Superintendent of the School for Imbecile Children at Larbert, Scotland. Speaking of the general causes of idiocy whose vagueness is not favorable to scientific inquiry, there are more determinate exciting causes. "The child becomes idiotic either through lack of development or nutrition, or through disease or injury befalling the brain, before or after birth. This brings us to the classification of idiocy which I attempted, based upon pathological conditions. Had I found a tolerable classification of the kind already existing, I should certainly have made use of it; but

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as I knew of none, I found it was necessary to have some arrangement, in order to say clearly what I wanted to say." *

Dr. Ireland thinks that all kinds of idiocy have not the same feature, nor ought to be treated the same way; and that it is improper to define idiocy as simply a deficiency of the mental organs, but that the mental deficiency depends upon malnutrition or disease of the nervous centres, occurring either before birth or before the evolution of the mental faculties in childhood.

Dr. Ireland classifies idiocy as follows:

1. Genetous idiocy.
2. Microcephalic idiocy.
3. Eclampsic idiocy.
4. Epileptic idiocy.
5. Hydrocephalic idiocy.
6. Paralytic idiocy.
7. Cretinism.
8. Traumatic idiocy.
9. Inflammatory idiocy.
10. Idiocy by deprivation.

I. *Genetous or Congenital Idiocy* †.—In these cases as the diseased condition, entailing deficient mental manifestation, is complete before birth, the presumption of a hereditary connection is stronger than in other forms. If the family history is known, there are often parents, aunts or uncles who have been insane, imbecile, epileptic or deaf, or have suffered from some other disorder of the nervous system. The following are the main characteristics of this class enumerated by Dr. Ireland: Often dwarfish; deformities common, especially a high vaulted palate; teeth irregularly placed and subject to decay; deficient growth of finger nails; clubbed fingers and feet; squinting and rolling of the eyes. The circulation is often feeble, and the general temperature a degree or two lower than usual, and the limbs, especially the lower ones, are frequently cold. Genetous idiots sometimes sit or sleep in strange postures, which may be unalterably confirmed by habit. Occasionally, however, genetous idiots are strong and good looking, with well-formed heads, good teeth, and no deformities whatever.

II.—*Microcephalic Idiocy.*—Dr. Ireland considers the rela-

* *On Idiocy and Imbecility.* By William R. Ireland, M. D., London, 1877. p. 36.

† Nearly sixty-four per cent. of eight hundred cases admitted into the Earlswood Asylum by Dr. Grabham were congenital—*British Medical Journal*, January 16, 1865.

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tion of the size of the brain to mental power as a very puzzling question in physiology. He is inclined to call all heads microcephalic which are below seventeen inches in circumference. Broca calls microcephalic every cranium which has not been artificially deformed, whose antero-posterior diameter is less than one hundred and forty-eight millimetres—five inches, nine lines. The Peruvians were a microcephalic race, and they possessed brains no larger than the Hottentot, yet they excelled as engineers, architects, sculptors, weavers and agriculturists; and they had acquired great skill in the arts of the goldsmith, the engraver, chaser and modeller.

Dr. Seguin * says that Esquirol, Pritchard, Jovill and others spent thirty years in measuring and weighing the heads of living and dead idiots, and they arrived at the following conclusions:

1. No constant relation exists between the general development of the cranium and the degree of intelligence.

2. The dimensions of the anterior part of the cranium, and especially of the forehead, are, at least, as great among idiots as among others.

3. Three-fifths of idiots have larger heads than men of ordinary intelligence.

4. There is no constant relation between the degree of intelligence and the weight of the brain.

5. The different degrees of idiocy are not measurable by the weight of the brain.

6. A cranium, perfectly formed, often encloses a brain imperfectly formed, irregular, etc.

7. Sometimes the brain of idiots presents no deviation in form, color and density from the normal standard; it is, in fact, perfectly normal.

Few idiots who are microcephalus are of ordinary stature, and many of them are mere dwarfs. The head is narrow and tapering near the top. The nerves of special sense are generally well developed.

Dr. Wilbur, in his report of the New York State Idiot Asylum for 1857, speaks of a boy twelve years old, rather

* *Report of the Commissioners on Idiocy to the General Assembly of Connecticut*, New Haven, 1856, p. 57.

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small of his age; the greatest circumference of his cranium was only thirteen and a-fourth inches. "He was not cleanly in his habits; had but little idea of language, was passionate, could not speak at all; he has now been under instruction a year; he can distinguish a variety of forms and colors; he knows the names of all objects in the school-room and about the house, and also the names of all the pupils in school; he recognizes a great number of pictures of objects; he is beginning to speak, and has already learned several printed words as the representatives of familiar objects; he is now making sensible progress every day."

In the Eleventh Annual Report for 1862 there is an account of the further progress of the same pupil: "A boy whose head was exceedingly small—in fact smaller than any on record, except those of the Aztec children. He was in the asylum for five years, improving in many respects, but the extent of his further progress was so limited that he was dismissed.

III. *Eclampsic Idiocy*.—In this class idiocy succeeds to infantile convulsions, chiefly during dentition; they may occur, however, a few days after birth, owing perhaps to some injury to the head during labor. Dr. Shuttleworth, who made some enquiries at the Earlswood Asylum, found that 14 per cent. of the cases there were ascribed to convulsions at teething.

IV. *Epileptic Idiocy*.—Epilepsy is one of the commonest causes of insanity as well as of idiocy, and it is therefore difficult to draw the line between epileptic idiocy and epileptic dementia. Dr. Ireland thinks that if the epilepsy has caused the faculties to become impaired before the age of seven, the patients ought to be treated as epileptic idiots, and he sees no practical difficulties to their being admitted to training schools. "Even when the fits are frequent the general health of this class is in most cases vigorous; they have a good appetite, and are physically powerful."

V. *Hydrocephalic Idiocy*.—Hydrocephalus is one of the most fatal of the nervous diseases of children. But while many children die of water in the brain, a few recover and are generally idiotic. The child is dwarfish, usually deaf

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sense of touch is dull, and the voice is low with a hollow sound. They are frequently of very feeble constitution and of a tuberculous or scrofulous diathesis. They are, as a rule, soft, gentle, and trusting in their disposition, and somewhat awkward in their notions.

In twelve cases the size of the head, although large, did not exceed twenty-four inches in circumference. The size of the head does not always form a safe criterion as to the amount of injury done to the mental powers.

Professor Albers, of Bonn, says that mental obtuseness and paralysis indicate effusion in the lateral ventricles of the brain, and restlessness and mental derangement in the sac of the arachnoid.

VI. *Paralitic Idiocy.*—Injuries to the brain causing paralysis may take place before birth as well as after it. Before birth the brain may suffer lesions which would entail loss of life after birth. A good deal depends upon the more or less healthy state of one hemisphere of the brain.

VII. *Cretinism.*—This is an endemic disease very common in the Alps. It is owing to an arrested development of the nervous system and bodily organization generally, either before or after birth, due to a local cause, as the constitution of the soil, water, air, etc., and marked by characters which in some respects distinguish it from ordinary idiocy.

VIII. *Traumatic Idiocy* is owing to injuries to the child's head during the process of birth. These may cause concussion, compression, hæmorrhage from the meninges, and destruction of the gray or white cerebral substance.

IX. *Inflammatory Idiocy.*—Dr. Ireland says that he has met with few cases of idiocy which he could clearly trace to inflammation of the brain not due to external injury. It is certainly not uncommon to hear parents assign the idiocy of their children to some fever in early childhood, but Dr. Ireland says that he should certainly reject statements of this kind in which there were marks of genetous idiocy, such as a vaulted palate or irregular and bad teeth.

X. *Idiocy by deprivation, i. e.*, by being deprived of two or more of the principal senses. Says Dr. Ireland: "Idiocy by deprivation is like a seed which does not sprout because it is

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kept away from sunlight and moisture, while incurable idiocy is like a seed in which the germinal faculty has been destroyed; and the higher grades of idiocy resemble seeds in which the germinal capacity is much impaired, and the growth enfeebled, so that they require unusual stimulants."

In one case a boy was sinking into an extremely obtuse condition, from having become deaf and dim of sight, who had his mental powers and faculty of expression aroused by being taught figurative signs and to spell on his fingers. The case of Laura Bridgman, given in another part of this article, is a good illustration of this form of idiocy.

THE EDUCATION OF IDIOTS.

Idiocy has existed in all ages in every country, but no attempt had been made to educate them until Itard, the celebrated physician to the National Institution of Deaf and Dumb at Paris, took in hand the training of an idiotic boy. About 1798, a boy about eleven or twelve years of age was seen in the woods of Caune, in the department of Aveyron, in France, seeking for acorns and roots. He was caught and brought to Paris. Pinel, physician in chief to the insane at Bicêtre, and others believed him to be an idiot, and M. Sicard, after vainly trying to develop his intellect, left him to wander neglected in the halls of the school for deaf mutes. Itard did not believe idiocy curable, and in devoting himself to this case, his object was not to improve or cure an idiot; it was "to solve the metaphysical problem of determining what might be the degree of intelligence and the nature of the ideas in a lad who, deprived from birth of all education, should have lived entirely separated from the individuals of his kind."

Itard embodied this programme in five propositions:—

1. To endear him to social life, by making it more congenial than the one he was now leading; and, above all, more like that he had but recently quitted.

2. To awaken his nervous sensibility by the most energetic stimulants, and at other times by quickening the affections of the soul.

3. To extend the sphere of his ideas by creating new wants, and multiplying his associations with surrounding beings.

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4. To lead him to the use of speech by determining the exercise of imitation, under the spur of necessity.

5. To exercise, during a certain time, the simple operations of his mind upon his physical wants, and therefrom derive the application of the same to objects of instruction.

After following this programme, which was adapted to the education of a savage, for more than a year, Itard formed in 1802 an entirely new programme, more fitted for an idiot than a savage. It embraced:—

1. The development of the senses.
2. The development of the intellectual faculties.
3. The development of the affective functions.

For more than a year Itard followed this psychological programme, thus laying the foundation of the physiological education of idiots. But he never educated any other idiots, and long labored under the delusion that he was reclaiming a savage instead of educating an idiot.

In 1828, a school for idiots was carried on for a short time by Verrus and Leuret at the Bicêtre. In 1831, M. Valret attempted the same work at the Salpêtrière; and in 1833, Dr. Voisin organized a school for idiots in Paris. None of these attempts, however, met with sufficient success to insure their continuance.

In 1838, Dr. Edward Seguin* opened a school for the

* Edward Seguin was the son of T. O. Seguin, and was born in Clamecy, Department of Nièvre, France, January 20th, 1812. He was educated at the colleges of Auxerre and St. Louis, Paris. So early as 1837 he commenced treating an idiotic boy with the advice of Itard, later with Esquirol, and in 1838 opened the first school for idiots. This school and the first exposition of the method used in it, published in the *Annales d'Hygiène*, was the mother of the seventy-five institutions for idiots since erected in various countries. After the revolution of 1848, he came to the United States, and during the ensuing ten years was resident in Ohio, at first in Cleveland, and subsequently in Portsmouth. After revisiting France, he established himself in New York, where he completed his studies and graduated M. D. at the University Medical College in 1861. Dr. Seguin died. The following is a list of his works on idiocy: *Resumé de ce que nous avous fait Pendant Quatorze Mois* (with Esquirol): *Conseils à M. O.—sur de l'Education de son Enfant Iidot*, 1839; *Théorie et Pratique de l'Education des Idiots*, part first, 1841, part second, 1842; *Hygiène et Education des Idiots*, 1843; *Images Gradutes a l'Usage des Enfants Arriérés et Idiots; Traitement Moral, Hygiène, et Education des Idiots, et des autres Enfants Arriérés*, 1846; *Historical Notes of the Origin and Progress of the Treatment of Idiots*, translated by Dr. J. S. Newberry, 1852; *Idiocy and its Treatment by the Physiological Method*, revised by Dr. E. C. Seguin, 1866; *New Facts and Remarks Concerning Idiocy*, 1870.

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education of idiots in the Hospice des Incurables de la Rue St. Martin, and not long after the idiots in the Bicêtre were placed under his charge. His intelligence, skill, and zeal attracted public attention, and the public authorities of France and scientific bodies acknowledged the merits of his system. His works on the management, education, and training of idiots were for many years the only text-books on the subject.

In 1841, Dr. Guggenbuhl opened in Switzerland an institution for the education of cretins, in which he was very successful, and attracted wide attention, and charitable institutions for idiots were established in all the more advanced countries of Europe.

The first training school in England was founded at Bath, in 1846, by Miss White, and in 1847 an institution was begun at Highgate, which afterwards became the great asylum at Earlswood. There are now eight institutions, public and private, in England, three in Scotland, and one in Ireland, in which over one thousand idiots and imbeciles are gathered for instruction. Besides these several large custodial establishments exist where indigent and pauper cases of idiocy are properly cared for at the public expense.

In 1848, the first school in the United States for the training of idiot children was opened at Barre, Mass., by Dr. H. B. Wilbur. A few months later Dr. S. G. Howe opened an experimental school at South Boston, in connection with the Blind Asylum over which he presided. Twenty-five hundred dollars a year for three years was granted by the Massachusetts Legislature for the experiment, and at the end of this time so satisfied were they with the result that the idiot institution was placed on an independent footing.

In 1851, the State of New York established an experimental school at Albany, for which the services of Dr. Wilbur, of the school at Barre, were secured. For five years efforts had been made to establish this school, but so great was the incredulity and want of faith in this effort to educate idiots, that the people were slow to be convinced by the utility or necessity for any expenditure for the purpose. It was not, however, until 1854, at Syracuse, that the corner-stone

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vas laid for the first State asylum in this country for idiots. In 1852, a private school had been founded at Germantown, Penn., by Mr. J. B. Richards, which soon became the Pennsylvania Training School for Idiots, at Media.

In 1855, Dr. H. M. Knight visited Barre, with two other commissioners appointed by the State of Connecticut, to examine into the merits of that institution. After many discouragements, and by persistent work, he was finally enabled to open a school which was finally incorporated as a public institution.

In 1857, a school was incorporated in Ohio; in 1860, one in Kentucky; and in 1865, one in Illinois. In 1860, the municipality of New York city established an idiot asylum for its pauper children, and in 1867 a school for the teachable cases was organized there.

[TO BE CONTINUED.]

Clinical Reports.

Case of Plastic Operation for Deformity of the Lid. By JAMES L. MINOR, M. D., of New York.

F. B., æt. 38, an Italian fruit vender, consulted me at the New York Eye and Ear Infirmary for complete eversion of the lower lid (ectropion), of eighteen years' standing, which resulted from the healing of an abscess in that locality. The ciliary margin of the lid was drawn down and firmly united by cicatricial tissue to the lower border of the orbit and the adjacent bone. The conjunctival surface was greatly hypertrophied, and looked forwards. The inferior *cul de sac* was completely obliterated.

I operated, under ether, by making two incisions—one from the inner canthus, downward and a little outwards, about one inch and a half in length; the other, from the outer canthus, downward and a little inwards, so as to reach the extremity of the first incision—the two forming a V-shaped cut, that included the lower lid and tissue below for an inch and a half. The tongue thus formed was dissected up by dividing the subcutaneous tissue to a point just below the ciliary margin of the lid; and then it was slid up so as to carry the border of the lid to its proper place, the con-

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junctiva being turned in towards the globe in so doing, and the lines of incision forming a Y. This was not sufficient to reduce the deformity, and I next removed a horizontal triangle of tissue from the outer canthus, thus shortening the lower lid and making it possible to lift it to a higher point than before. The hypertrophied conjunctiva still had a tendency to cause some eversion of the lid, and a stitch was introduced from the *cul de sac* of the lower lid, subcutaneously, to a point just below the malar bone, where the two ends were tied over a match, after sufficient traction had been made to pull and hold the conjunctiva in place. The incisions were then united with sutures and harelip pins; a firm compress bandage was applied, and the patient sent to bed in one of the hospital wards.

After remaining there for an hour or two, he got out of bed, dressed himself, and left the institution in spite of the protests of the house surgeon; and was not seen until nine days later, when the bandage was removed for the first time, and the pins and sutures taken out. Much to my surprise, the parts were in good condition and in perfect position, and everything was entirely healed a week later, leaving nothing to be desired.

The case presents two points of interest—first, the success of an operation which is usually reserved for cases of minor deformity; second, the healing under such adverse circumstances. The conjunctival subcutaneous stitch was an important item in the operation.

233 *Madison Avenue.*

Correspondence.

Berlin, Prussia, June 18th, 1883.

Sanitary Commission Pavilion in the Hygienic Exhibition in Berlin—Dr. Robert Koch—Preparation of Tubercular Bacilli—Pure Culture—Determination of Importance of Parasites.

Mr. Editor,—The reform of the Public Sanitary Board in England was due mainly to the appearance of the cholera, and propositions made in Parliament to enquire into the condition of the working classes. The main question, however, remained unanswered, but has been discussed from year to

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year by that body. The honor is mainly due to the German government for the popular agitation of this question—especially among physicians—and the active part taken by Prince Bismarck in its promotion.

More than sixty years ago, Dr. J. Neumann, of this city, drew the attention of the public to the importance of having general and provincial sanitary boards, to be represented in a central organ and by a special minister. Of late years, the first to submit the proposition, if the State should not have a sanitary commission, was James Hobrecht, in 1868, in his report on the drainage and sewerage system of Stettin. In the newly-formed Hygienic Section of the German Philosophical Society, it was repeatedly discussed, and finally a committee was appointed, of Hobrecht and others, to present a petition to the Reichstag of the then North-German Confederation desiring a central organization and sanitary supervision. It would have probably remained untouched for many months had not Bismarck given it his personal attention; and chiefly as the result of his intervention, the Imperial Sanitary Commission was formed in 1877. Among the first matters considered was *adulteration of food*, and the provision laws were the first fruits of the new organization.

The Society has, in the last few years, developed an activity which produced a scientific institute of the first rank, and paved the way for more general sanitary supervision. Chemistry and physics, ever associated with the names of Wolffhügel and Sell, most zealous of their reputation, also went to work with renewed vigor. Experimental hygieny, with special regard to the investigation and prevention of infectious diseases, has been carried on in Germany as in no other country. Under such circumstances, it was possible to form an exhibition. Austria was invited to take part in it, to which she responded. May 1st, 1882, was the day appointed for the opening, the houses were built and exhibits were in place, but two days before all was ready it was completely destroyed by fire with most of its contents. The committee, not discouraged, started immediately to work again; and

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this year, on May 9th, it was opened, under the patronage of the Empress, by the Crown Prince.

The two main features of the Pavilion, are (1) two completely equipped laboratories for the examination of food, and conducting experimental work in infectious diseases; and (2) series of tables of plates and statistics. The Director of the Commission, Dr. Struck, together with his assistants, Drs. Koch, Wolffhügel and Sell have undertaken the arrangement and direction of their department with great care, and one of these gentlemen is always present to explain the working of the apparatus.

The first room is used especially for chemical analyses. It contains a large press for keeping glass and porcelain ware, statives, etc., a digestor, a distilling apparatus, blow-pipes, and three working tables. Two are placed before large windows, while the third is in the middle of the room, on which are all the chief re-agents employed. On this centre-table, besides, are instruments for determining the amount of alcohol in spirituous liquors; also hydrometers for milk tests, which, according to universal experience, have proved the most useful. On the side-tables are the instruments for chemical analyses of waters, especially for determining the amount of ammonia, nitric acid, etc.; a number of burettes, stipettes and other apparatus for volumetric analyses. Much of the furniture is nickel-plated or nickel, and shows to what great extent this metal is now used in chemical laboratories.

In the second room are the instruments used more especially for physics, such as microscopes, spectroscopes, polariscopes, alcoholometers, saccharometers and general platinum furniture. On a table are analyzing scales and weights, a Moher-Westphal balance for determining specific weights, and Abel's improved apparatus for testing petroleum.

In the third and smallest room, on a white porcelain-covered table, is a combustion oven, gasometer, etc., for carrying on organic elementary analyses, and determining the nitrogen of the atmosphere.

Before we give any account of the second laboratory, it will be well to say a few words about Koch, as he is so inti-

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mately associated with the germ theory. Robert Koch's first work bears the date of 1876, at which time he occupied himself with experiments on the spleen, and a year later, in preserving and photographing bacteria. About this time, Weigert, of Leipsic, discovered a method of coloring microorganisms, which has opened up for that study a new epoch. Koch worked on his plan most arduously and successfully, and our esteem for this investigator must ever increase when we see that he showed such activity, not in some academical position, supported by a richly endowed and practically arranged laboratory, but without help as circuit physician, with a large town and country practice in the province of Posen. Under such restricted circumstances appeared his pamphlet on "The Cause of Septic Poisoning," which was highly endorsed by one of the first medical societies in England. Soon after this, he made the discovery (as did Carter about the same time in Bombay), that the spirochaetes in relapsing fever (of Obermeyer), could be transmitted to monkeys—an important result for the doctrine of infectious diseases. Then came the discovery of the tubercular bacilli, which completed his renown and popularity.

It may be well here to say how bacilli may be prepared: 1st, About 20 drops of pure aniline (colorless) is added to 20 grammes of water well shaken and filtered; to this is added a concentrated solution of rubin fuxin in alcohol (15-20 drops absolute alcohol.) 2d. A small quantity of sputum, size of a pin-head, is pressed firmly between two glass covers, dried perfectly in the air, then passed two or three times through a lamp frame, then laid in the above liquid for 15 or 20 minutes. 3d. After this, it is taken out and decolorized in a mixture of 30 parts water to 10 parts concentrated nitric acid till the red color has entirely disappeared, then washed out carefully in water, again colored in a solution of green malachite, washed again in water and dried in the air. 4th. If it is desired to keep the preparation for a few days only, stick the glass cover to the object-glass with oil of cloves, but for a few weeks use Canada balsam.

Koch gives his personal attention to his department, and

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is always ready and willing to make explanations, which he does in the clearest manner. He regards the investigation of the lowest forms of organisms as the main end to be accomplished by sanitary supervision. It is to determine if they are in a position to bring about disease, to show if they are capable or not of being infectious—that is, of being transmitted to individuals up to that time healthy; and if it was either on such who lived in the same locality as were spontaneously attacked or artificially infected, or on such who lived elsewhere; then the manner in which the pathogenic germs increase in the animal body, to follow their behavior out of the same, in the air, water and soil; finally, to discover the best means which work their destruction, or at least confinement. In many cases we do not know the peculiar form of germ—for example, of cholera. In such, however, we must always observe the appearance and behavior of the germs empirically on the next remaining bacteria, and from that infer with more or less probability as to the action of this not yet known disease-producer.

That bacteria occur in the blood and healthy tissues, is maintained by some; but by means of the microscope and other methods of examination, they have not as yet been certainly proved. So soon, however, as bacteria or other micro-organisms are found in the human body, or if any of the effects of such are observed, they must at least excite suspicion and challenge further investigation and explanation.

One of the most important methods we have for this kind of examination, is photographic copying; it is, for the investigator, of the highest importance, because no where is a purely objective perception, free from all hindrances, so necessary as in this department. It alone decides, in many cases, whether a discovery belongs to this or that kind of micro-organism or not. If, then, we have the presence of such dangerous organisms in the animal body, their capability of increase and their transmission to other individuals being determined, it remains a most important, and, for the sanitary board, most interesting task to carefully work out and to investigate their conditions of life. This is accom-

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plished through the so-called "pure culture," a word which is now repeated by many, few of whom have a correct idea of its meaning.

Of late years, pure culture signifies, first, a nourishing liquid of such a composition that the germs will thrive in it. This fluid must be "sterilized," that is, it must be raised to such a temperature as to kill all germs which it may contain, thus leaving the organisms alone to grow. Furthermore, the containing vessels must be disinfected, for which purpose wadding, previously cleansed, must be used. From this vessel the germs, when their number has sufficiently increased, are transferred by disinfected instruments to another similarly prepared; and so on, from vessel to vessel, until a so-called generation series is obtained. The difficulty of sterilizing is extraordinarily great, as is also the condition, that the grafting substance contain nothing but the breeding organisms, hard to comply with.

Koch has overcome most of these difficulties by methods of his own. A simple experiment, which anyone can repeat, disclosed to him at once a new way. Take a boiled Irish potato; cut it in half and let the pieces, with the freshly cut surfaces up, lie in the air several hours, and then put them in some damp place—for example, under a glass bell previously wetted. In order to prevent drying, proper attention must be paid to the temperature of the room. On the second or third day following, variegated and small drops appear on the surface, all of which differ from one another, increasing gradually more or less in size till at last single drops emerge into one another, and pronounced foulness finally sets in. Each one of these small particles consists of a definite kind of micro-organism, the germs of which came originally from the air. There takes place almost complete "pure culture," which was brought about in a natural way. Koch used this method, only instead of a potato he added gelatine to the liquid and allowed it to rigidify. The great advantage of the latter is that it affords firm nourishing substance, which can be conveniently spread out on flat dishes or glass plates, and thus the possibility is attained of counting the number of germs found, as the examination of the

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spree water has shown. The same method can also be used for the examination of soils, air, gases, etc. So that for the most important branch of hygiene for which the chemico-microscopical analysis up to the present time has been insufficient, there seems to have come a new epoch.

On a double work-table in the Pavilion is seen the "pure culture" of germs and bacteria in all stages of their development, cultivation of mould fungi of different kinds from which some diseases may be produced; they have all not yet been botanically classified. Further on, we see the "pure culture" of bacteria proper nourished in the above mentioned liquid. The single colonies may be plainly distinguished; and if a piece is taken up on a glowing platinum wire, and brought under a microscope, it may be told eventually to what class it belongs by the employment of certain coloring matter. There are, to mention only a few, bacilli of tuberculosis, of gangrenous spleen, septicæmia from pigs and mice, and through the celebrated experiment of Pasteur, chicken cholera; further is found the brown micro-organism of vaccine matter, a violet and a fluorescent exciting bacillus, a micrococcus of milk, bacilli of buttyric and lactic acids. In large glasses are seen alcoholic preparations of organs in which are, for example, the tuberculosis and diseased mucous membranes of guinea-pigs, bats, rabbits, horses, rats, monkeys, goats, etc. On a small table near by is a thermostate—an instrument by which it is possible to keep the temperature at a constant height. For the sterility of blood serum, 58° C. is used; and for the fixing of the same, 65°–70° C. is needed. In the so-called "dark room," with its water fixtures, photographic solutions, negatives, photometers, illuminators, lamps, etc., is a window with movable colored panes of glass. Here is also the new micro-photographic instrument of the most complete make, constructed after a patent of Koch's. On a ground-glass window are four frames containing from 20 to 80 pictures in black crayon. The contours are of great delicacy, much more so than duplicates on paper; and as it is impossible to show each visitor the much desired micrococci, bacteria and bacilli under the microscope, this opportunity is given for teaching the differ-

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ent forms in the clearest and most convenient manner. In the first frame are photographs of the latest investigations of Fehleisen, assistant in Bergmann's Surgical Clinic, of the micrococcen in erysipelas, bacilli in gangrenous spleen (colored and uncolored)—some in the first changes into mould formations. In the third frame are bacteria with thread-like extensions, which now explains how their movements were possible. In the fourth frame, finally, are photogrammes of small-pox micrococcen and the already mentioned sperochaetes of relapsing fever, from men and monkeys. The last preparation is from the brain, in which they can be very plainly seen in the blood-vessels. The same class of sperochaetes are also found in certain kinds of bog-water, and an opportunity is here given for a comparison.

When one maintains that he has found a parasite in any kind of disease, there is not much really won. Koch himself has made this clear in two celebrated cases, and the question is, What end is to be reached and by what road? There is tuberculosis. Formerly it was discovered, by microscopic investigation and color re-agents, that bacilli were present in certain diseased organs; these germs were disinfected and isolated, and then different animals, whose predisposed condition for this disease were known, were reinoculated and tuberculosis again breeded. A second very instructive example is erysipelas. It has been known for some time that the lymph cells contained micrococci; however, it was not proved with certainty that they were the cause of the disease. This has lately been done, as the experiment of Dr. Fehleisen shows, who succeeded in breeding the germs artificially from a small piece of skin cut from a patient with erysipelas. With some of these germs he inoculated a person, and so produced a typical case of erysipelas, which left no doubt as to the cause of the disease in the latter case. How are we to avoid such insidious forms of sickness and death? By bringing our bodies under the most favorable hygienic relations; and if it is, on the one side, the work of the physician to kill these parasites internally, it is, on the other side, the work of the hygienist to destroy them outside of the body.

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Book Notices, &c.

[The first of these "notices"—on *Bilious and Typhic Fevers of Warm Countries*—prepared by the well-trained pen of Dr. Wm. G. Eggleston, Assistant Editor of the Philadelphia *Medical News*, partakes so much of the nature of an "Original Communication," as it is a thorough review, that we transfer the Book Notice Department to its present position in this number.—EDITOR.]

Traite des Fievres Bilieuses et Typhiques des Pays Chauds. Par le DR. A. CORRE, Médecin de Ire Classe de la Marine, Professeur á L'École Medicale de Brest. Avec 35 Tracés de Temperature dans le Texte. **(Treatise on the Bilious and Typhic Fevers of Warm Countries.** By A. CORRE, M. D., etc. With 35 Temperature Charts in the Text. 8vo. Pp. viij—568. Paris. 1883. Octavo Dain.)

The author's *raison d'être* for this work is that he cannot accept certain pyretic types that are given in many classic works. The study of them appears to him incomplete, or turned aside from the true methods of investigation by systematic interpretations. He now wishes to interpret them by describing bilious and typhic fevers, such as are observed in warm countries; fevers whose clinical delimitation is rendered so obscure that they seem the very chaos of internal pathology.

In his first chapter, devoted to a general consideration of fevers, he gives the following by way of definition: "The name Fever or Pyrexia is given to diseases of which the febrile state constitutes the essential characteristic, and which is developed without any primitive local lesion. The febrile state comprehends, as symptoms, increased bodily temperature, acceleration of pulse, and certain troubles of nutrition and innervation." Though not a strictly logical definition, it is one of the best that we have seen; for it is worthy of remark, that, of the many writers upon the subject, very few have attempted to define it.

It is not, however, in a critical spirit that we say this. The word "Fever" indicating many different states of the body, in which pyrexia, acceleration of pulse, etc., occur, would be very difficult to define. The word is used in two senses: One indicating a pyrexial state, from the operation of causes in the system, from whatever circumstances it may arise, or whatever length of time it may occupy; another, indicating certain series of phenomena, or particular diseases. In the latter sense a fever is not merely a state, but a process, produced by some affecting—often infecting—cause

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operating upon or within the system.* The author is considering fever in the latter sense of the term. To give a minute description of fever in the abstract would be well-nigh impossible. It would be necessary to make a distinction between the phenomena dependent upon the conditions or lesions upon which the fever depended, and the phenomena proper to fever; which would be a very difficult task, seeing that we cannot distinguish, in the great majority of cases, between lesions determining the fever and those determined by it; not only this, but the lesions depending upon or determining fevers differ in different types of fever. As Broadbent very properly remarks:† In order to give such a description of the febrile process, "either some variety of fever must be taken as a type to which other forms are referred, which is vicious in principle; or all the phenomena of all febrile conditions must be enumerated and classified, which would confound the accidental with the essential, and would result in a heterogeneous collection of facts without due relation among themselves."

Few, if any other authors, enter into consideration of the general characteristics of fevers, while Corre devotes no less than twenty-eight pages to this subject, prefacing his consideration of their general characteristics with the remark that fevers are *general* diseases, affecting the economy in its entirety, and bearing no relation to the initial alteration of any particular organ or tissue. True, they are accompanied by lesions, for we cannot imagine a disease which does not, in some manner, modify some anatomical element and some physiological function; but as yet science cannot positively establish what lesions are to be considered as primitive or primary. The alterations in the blood, consisting in qualitative modifications of the plasma, quantitative and qualitative modifications of the globular elements, though, without doubt, of great importance, are still imperfectly understood. The pathological alterations in the solid structures, which may not be proportioned to the violence and nature ot the disease, or which, on the other hand, may be profound, as where coagulation of the myosin takes place inducing muscular rigidity, and seem in every way proportioned to the gravity of the disease, must still be classed among the *terræ incognitæ* of pathology. But in giving a general description of the pathological alterations in *fever*, the same difficulties are encountered as are met in attempting to describe the

* *Practice of Medicine*—Palmer.
† Quain's *Dict. of Medicine.*

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process of fever as a whole, and this matter can be discussed more satisfactorily in a consideration of the separate types of the disease.

The subject of transmissibility of fevers is discussed at some length by the author. At the outset, he defines infection as a term "implying the idea of a contamination of the organism by a principle which enters it with the blood, pollutes it, obstructs the life of its elements, and in this manner produces more or less rapid destruction." This definition is faulty in implying the necessity of the existence of the organism to be contaminated. In the present state of our knowledge, Flint's definition is a much better one: "The term infection denotes any causative agent which, under certain conditions, is capable of unlimited increase or multiplication." Under this definition, an infectious disease may be communicated by means of contagium, or it may not.* The author rejects the doctrine of the causation of disease by living organisms for the following reasons, the validity of which we will discuss in detail.

No demonstrated correlation exists between the distribution of the microbes in the exterior media and the development of the endemic or epidemic diseases which are attributed to them. The algoid corpuscles, with which intermittent fever is supposed to be related, do not exist in unhealthy regions alone, and even in these regions no relation can be established between the numerical proportion of these elements and the particular modalities of malaria. Typhoid fever originates and develops by a measure which the estivo-autumnal temperature abates and humidity increases; it generally attains its height during the period when the atmosphere is poorest in bacteria. True, the microbes swarm in telluric waters, but as all cases of infection cannot be accounted for by the ingestion of suspected water, and as the atmosphere is the most common vehicle of the contaminating principle, the contrast between the state of that medium and the evolution of annual epidemics seems to be a strong argument against the living-organism theory.

As regards *intermittent fever*, (1) it is universally acknowledged that there are certain localities or territories in which it occurs year after year. These localities either contain or are in proximity to marshes, or tracts of decaying vegetable matter. (2) The persons most liable to the disease are those living in these marshy districts. (3) The disease is more

* Flint, *Practice of Medicine*, 5th Ed.

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likely to be contracted during the hot periods of the year, and especially if there is sufficient water in these marshes to produce, with the aid of the heat, decomposition of the vegetable matter. (4) When winds prevail in these districts, persons living to the leeward are more likely to suffer than those to the windward side of the marshes. (5) The intervention of trees, between these marshes and persons in the vicinity, affords, to a certain degree, protection from the disease. The planting of the Eucalyptus * in the Roman Campagna, and the subsequent abatement in malarial fever in that locality is strong proof that the trees in some way afford protection; and this protection must arise from the fact that the trees *absorb* some poisonous agent. The probabilities are immensely—infinitely in favor of this poisonous agent being organic rather than inorganic. (6) When these marshes are thoroughly drained and the decomposition of vegetable matter arrested, the malarial fevers in that locality are arrested. This is strong proof of the assumption that this decomposition must be a powerful, if not *the*, factor in the causation of malarial disease. The very nature of decomposition, as shown by the investigations of Pasteur, implies the production of organisms. A further strong proof of the vegetable-decomposition origin of malarial poison is the fact that if the marshy districts are completely under water, so that the oxygen of the air cannot reach the decaying vegetable material, and if there is a steady temperature of less than about 65° F., the disease abates.

This statement seems to be partially borne out by the following case reported by Dr. T. S. Dekle:† A gentleman, whose family and servants had suffered with malarial disease, lived in the vicinity of a large cypress forest, in which there was a stand of water from six inches to four feet deep. Thinking that this was the source of infection, the pond was ditched (in the spring). As the water ran off and the summer came on, he, his family and servants became affected and finally prostrated with a malignant type of malarial fever. Other persons, living within a mile of the swamp, were affected with malaria to a greater extent than ever before. After the swamp had dried off and a dry season occurred, fire was applied and the whole swamp thoroughly burned out. Since that time the disease has almost entirely disappeared at that place.

*The ordinary Virginia and North Carolina pine trees or forests have been stated to be equally protective.—*Note by Editor.*

† *Transactions Medical Association of Georgia*, for 1882, p. 84.

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From this it appears that such places should be drained and burned in the autumn, when the heat is not sufficient for any extensive development of the malarial infection. The propriety of burning such places is established by the experiments of Ceri, to be mentioned further on in this review.

While at the port of Jahde, Wenzel made some observations on the effect of temperature in the production of malarial disease. He found that attacks of malarial fever coincided with a rise of temperature. The temperature curve preceded the sickness curve by about twenty-five days in the warm climate of that port.

In 1879, Klebs and Tommasi Crudeli discovered, in the marsh-mud of the Roman Campagna, a microscopic fungus, consisting of numerous movable shining spores, of oval shape. These were artificially generated in various kinds of soil. Both, the artificial and original, were introduced under the skin of dogs, all of which developed the symptoms of intermittent fever as observed in man. Marchiafava and Valenti state that they have detected the *bacillus malariæ* in human subjects, and in a more advanced state than was found in the dogs of Klebs and Crudeli.* Crudeli states that the organism can always be found in the blood during the period of invasion of the fever, but that they disappear during the acme, and then only spores can be detected. Laverau and Richard also affirm that, by experiment, the blood in malarial fever contains, during the accession, spherical organisms developed in connection with the red corpuscles of the blood. To this microbe, Laverau has given the name *oscillaria malariæ*. Its development takes place within the red blood corpuscle, until finally nothing remains of the corpuscle except its envelope. When fully developed these microzymes exhibit an oscillatory motion—whence their name. No vibrations can be seen in developed specimens. Laverau has also noticed, as has Kelsch,† that, when dead, these oscillariæ stretch themselves out, lose their shape, their envelope is dissolved, and only a gray mass, including a few black nodules, appears. Ceri has cultivated these germs, with great care, under the following conditions: (1) Cultures with quinine. (2) Cultures of micro-organisms present in different kinds of soil. (3) Experiments on animals.‡ He found that fluids of malarial soil, not cultivated in a special apparatus, con-

* See also *Am. J. M. Sc.*, Jan., 1882, 253.
† *Phila. Med. Times*, Dec. 16th, 1882.
‡ *Phila. Med. Times*, Dec. 10, 1882.

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tain only spores, but if malarial soils (natural and gypsumed) be artificially cultivated, many varieties of schizomytes are developed If, now, this soil be treated for five hours to a temperature of 158° Fah., or for four hours to a temperature of 224° Fah., all the developed schizomytes are killed, but the spores still live. The spores were killed by a temperature of 32° Fah. Uncultivated schizomytes, those from the atmosphere, resist the boiling longer than the cultivated; and are more resistant than those which have been longest cultivated. Ceri's experiment on animals gave highly interesting and very important results. Subcutaneous injection of fluid of gypsumed malarial soil caused irregular febrile attacks in rabbits, but without the intermittent type; injections of fluid of natural malarial soil caused repeated and severe febrile attacks with a marked intermittent character. Injections of gelatin-culture of natural malarial soil caused long-continued and severe febrile attacks of an intermittent type. Fluid of artificially cultured malarial soil which had been exposed for ten days to a temperature of 95° to 104° Fah., when hypodermically injected, produced intense and long-continued intermittent paroxysms. Two rabbits were taken; into one was injected fluid of natural malarial soil exposed to a temperature above 212° Fah., and into the other fluid from the same soil unexposed to this temperature. The effect was very marked; the first rabbit was attacked by only moderately intense febrile seizures; the second was attacked by a most fulminant form of malarial infection, with melanæmia and speedy death. Ceri then experimented with successive cultures of the malarial soil. Intravascular injection of the *fifth* successive culture, which had been exposed to a temperature above 212° Fah., produced a marked increase of temperature, though the culture had been a non-putrid one. Enlargement of the spleen, and melanæmia of the spleen and spinal cord were found in the cases in which high fever occurred. Spores were also found in the blood of these animals—in the spleen and spinal cord. Bacilli were also occasionally observed, very long ones being found in the spleen.

Not less interesting were Prof. Ceri's quinine culture experiments. He made a series of forty cultures, containing quinine in varying quantities from 1:100 up to 1:100,000. Each was infected by a drop of a turbid fluid of malarial soil. In these there was no development up to 9:900. From 1:1000 to 1:1500 non-putrid development began. The smaller the quantities of quinine, the more rapid, intensive and putrid was the development. In another series of eighteen cul-

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tures, containing quinine from 1:500 up to 1:9000, infected with gelatin culture of malarial soil, there was no development in 1:1500; but from 1:2000 up to 1:3000, non-putrid development took place, and from 1:9000 the development was accompanied by putrefaction. Microscopic examination of the cultures, the infection of which was made with natural fluids of malarial soil, kept for a long time in aquinitra, showed invariably a decrease in the number of schizomytes when the quantity of quinine was increased.

From this very brief extract of Ceri's paper, * it will be seen (1) that each successive generation of these cultured micro-organisms is weaker than the former, but regain their infective properties if placed again in the natural state; and (2) that as these germs are cultivated, they become less tolerant of high degrees of heat. These facts are in perfect accordance with the present views, among scientific men, as to the development of the typhoid fever poison, viz,: that after infecting a patient, it probably has to undergo a spontaneous cultivation in some favorable material before it again becomes infectious.† So much for the bacterial or organic origin of malarial fever.

In the face of these statements of men who are recognized microscopists, it is idle to say that they are unworthy of belief because we have not seen these organisms. The present unenviable position of certain microscopists(?) who have used that argument(?) against Koch, should be a warning that a failure to find what one seeks is not a negative proof. It must be proved that they have mistaken other matter for what they term bacilli, bacteria, etc.

In connection with the assumption that there is no relation between malarial disease and the algoid corpuscles found in malarial regions, the author introduces his statement regarding typhoid fever. Apart from the fact that, in malarial districts, typhoid fever is sometimes masked by or associated with the intermittent or remittent, we were not previously aware that the diseases were related. That the typhoid principle, whatever it is, is capable of reproduction, is an unquestionable fact. The disease does not die out in the system; and all evidence is in favor of the theory that typhoid fever is always dependent upon some pre-existing cause. As is well known, water and milk are the great media for its

* Translated in *Phila. Med. Times*, Dec. 16, 1882.

† This is the common ground between those who do not believe it directly contagious, and those who think that the organisms from a patient may infect a healthy person immediately.

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conveyance. Thousands upon thousands of cases have been traced directly to these two causes, and if cases arise which cannot be traced to any infectious source, thut is no proof that they have originated *de novo*.

In favor of its bacillal origin, Klebs claims to have identified a specific typhoid bacillus, not only in the blood and lymphatics, but in the tissues also, though some microscopists have not been able to find it. Maragliano, of Geneva, asserts that he has found that there is a uniform occurrence of organisms in the blood, taken from the spleen, of typhoid fever patients. Experiments were made on fifteen patients. At the height of the disease the blood of the general circulation contains both isolated and grouped organisms, consisting almost exclusively of spherical bodies, with a delicate contour of homogeneous appearance, and analogous to micrococci. Some of them are mobile. Similar organisms were found in the blood of the spleen; also, in it were found other organisms corresponding to those of Klebs and Eberth.* The blood was treated by the method of fractional culture, and new organisms were obtained, similar to the first. Bearing directly upon this question are the observations made by Meschede in the epidemic of relapsing fever in Königsburg in 1879–80. The spirilli of relapsing fever were found in almost every case during the attack.† Sternberg has shown‡ that serum from subcutaneous connective tissue and blood from an animal (rabbit) recently dead (after septic infection) swarms with micrococci, and is virulent in the smallest quantity. As often as the experiment was tried, fatal septicæmia was produced in a rabbit by injecting beneath its skin a hypodermic needle dipped in the blood of a rabbit dead as the result of an injection of saliva.

The second formula laid down by M. Corre as a reason for his rejection of the germ theory is that the presence of the microbus, declared to be infectious, is not constant in the blood of infected subjects. To this proposition we answer that they have been found in a great number of cases, and facts seem to warrant us in asserting that when not found the fault, in the great majority of cases, has been in the experimenter. It has already been shown that they appear during certain stages of the attack, and not in others. That they have been found is a positive fact, which will refute any number of negative results. In order to establish a patho-

* See abstract of Eberth's paper in *Med. News and Abstract*, Nov., 1881.
† *Am. J. M. Sc.*, July, 1882, p. 244.
‡ *Am. J. M. Sc.*, July, 1882, p. 69.

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logical fact, it is not necessary to examine every individual case, nor is it necessary to eat a whole barrel of apples in order to determine the quality of the apples.

3. The microbus found in contaminated subjects *may* either equally exist in healthy subjects, or *may* only differ in species from those found in indifferent media. Granting that they differ only in species, the author's proposition would have no weight. Examples are plentiful, both in the vegetable and animal kingdoms, where a slight difference in species makes all the difference between a harmless and a deadly agent. The word *may*, which Corre so carefully introduces, destroys the whole force of the proposition—if, indeed, it had any. To substantiate the page of argument in proof of this assertion, he quotes from Magnin's *Thèse* on Bacteria, published in 1878, at which time the subject of "bacterology" was in its *première énfance*. It would be a mere waste of time to trouble ourselves in dealing with an unwarranted hypothesis.

4. Inoculation of blood containing supposed infectious microbus upon healthy subjects, only gives negative or useless results. After reading this remarkable statement, we turned to the title-page to see if M. Corre is really *Professeur Agrégé á l'École de Médicine Navale*. Formad has shown* that when the urine of diphtheria patients, containing micrococci was filtered, and the dried filter-paper inserted under the skin, malignant diphtheria was produced; and, further, cultivated micrococci up to the second generation are capable of producing diphtheria inoculation. From this, and the experiments of Sternberg and others, above referred to, it is evident that the results are neither negative nor valueless. Such assertions as the above really do not merit argument. To answer established facts by assertions which are not only unwarranted but disproved by those facts, is detrimental to true science, and shows great weakness on the part of the assumer.

Again, he says: "Every parasitic disease should possess the property of unlimited transmissibility, of indefinite reproduction, whenever the pathogenic agent is brought in contact with its proper medium, in a healthy organism, in the state of development and under the form which permits adaptation to the medium." We grant the truth of this proposition, and say the experiments of Sternberg, Formad and, most notably, of Pasteur and Ceri go far toward proving that the germ diseases are capable of indefinite reproduction under the conditions named. Though the author

* *Am. J. M. Sc.*, Jan., 1882, p. 249.

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denies this, he brings, in support of his denial, no scientific facts, and, as before, it is useless to discuss unscientific assumptions.*

After these general considerations on fever, the author enters into the discussion of the different types of fever, and at some length. Forty-eight pages are devoted to a consideration of typho-malarial fever, the very existence of which is denied by some authorities.

By the term typho-malarial fever, the author comprehends the pyrexiæ which, produced under the double influence of malarial and typhic conditions, present a chain of phenomena, including those of the one and the intoxication of the other. He thinks that the fever should be studied under three distinct heads: (1). *Typho-malarial fevers by association, or duplicated*, in which there is a parallel and simultaneous evolution of two pyrexiæ, each arising under the influence of a proper infection, and independent of its congener. They take their clinical denomination from their typhic aspect associated with malaria. So we have *typhoid malarial fever*, resulting from the union of intermittent fever and typhoid (dothiénentérie), and typhic malarial fever, from the union of intermittent and typhus. (2) Typho-malarial, properly so-called, in which the pyrexia is simple, produced under the action of a singular agent (typho-malarial) of external origin to the infected organism. These are designated clinically as *typhoidiform malarial fevers*. (3) Transformed malarial fevers, in which the malarial fever becomes typhic, under the influence of an infection engendered by the organism itself. These are *typhoid malarial fevers by transformation*. The author admits that the malarial and typhic agents have each a separate existence, a particular origin, but the conditions under which they are generated may be united in the same system.

In all cases, he says, the hybrid character of the disease is shown by the duality of the lesions and symptoms. The lesions are those of typhoid fever and paludism, ulcerations of Peyer's patches and the solitary glands, enlargement and softening of the spleen, with infiltration of pigmented granules. The strongly-accented intermittence or remittence shows the intervention of a malarial principle. The other symptoms—epistaxis, diarrhœa, gurgling in the right iliac

*Although denying the germ origin of fevers, M. Corre continually speaks of them as being caused by a "particular infection." It would be interesting to know what he means by a "particular infection." Thus, he says, that the cause of remittent fever is malarial *infection*.

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fossa, lenticular spots, dicrotic pulse, etc., show the typhoid character of the disease. One of the strongest arguments in favor of the distinctiveness of typho-malarial fever is the continuance of the intermittent character of the fever after all typhoid symptoms have disappeared, as first noticed, we believe, by Bonnescuelle, in the Antilles, and since remarked by many observers. He says that the paludal manifestations rarely leave the patient as soon as the typhoid symptoms. This was also noticed by Regnier, during the epidemic of fever at the garrison of Batna, in Algiers, in 1881.* In the Tunis expedition, in that year, the young soldiers were taken with a simultaneous attack of typhoid fever and malarial fever. The attacks began with three or four sudden accessions of fever, but the symptoms of typhoid did not appear until about the fifth or sixth day. Hence, the author concludes that there are fevers in which the etiological influence of malarial poison is evinced by the course of the disease, the congestion of the liver and spleen, the rapidity with which the symptoms yield to quinine, and in which, at the same time, the action of a typhic (typhoid) infection is shown by a group of characteristic typhic malarial phenomena, without at any time presenting the proper manifestations of typhoid fever, typhus or any other defined typhic species.

Just here we shall digress somewhat from the present subject of consideration to state that the author announces his theory of infection in this place. He says: "We believe strongly in the existence of a *chemical* infectious series, comparable to the coloring and odorant series so well established to-day in chemistry. We suppose the existence of a septic molecule which can only unite as a malarial molecule; and, according to this hypothesis, we comprehend, under the title *defined typho-malarial*, the pyrexiæ or the modalities of paludal and typhic infection, a fusion, a defined type, under the influence of a composite agent (typho-malarial)." We suppose that the author would state his theory thus: Assuming the chemical formula of the malarial infection to be $C_n H_n O_n N_n$, and that of typhoid fever to be $C_m H_m O N_m S_m$, the formula for typho-malarial fever would be $S_m (C_{n+m} H_{n+m} O_n N_{n+m}) O$. We can scarcely imagine anything more seductive than this theory. It is beautiful; but there is one objection to it:—It has not the shadow of a foundation.

The author closes his argument in favor of the separate existence of typho-malarial fever by proposing that it shall

* *L'Union Méd.*, Sept., 1882.

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be named, not typho-malarial, but typhoidiform malarial fever. We cannot see the force of this proposition. If there is such a distinct form of fever, the former term is undoubtedly stronger and more expressive of a separate existence. The latter would only indicate a malarial fever which had assumed a typhoid form, or run into a typhoid state. The word "typhoid" itself is one of our most unfortunate terms, though its elimination from our medical vocabulary, however much to be desired, would cause endless confusion.

As stated before, there are eminent authorities who deny the existence of typho-malarial fever as a distinct entity. Among these it is sufficient to mention Woodward, Flint, and Bartholow. The former states that the lesions of typho-malarial fever are merely those of typhoid. The latter says: "All that can be claimed for typho-malarial fever is, that when typhoid fever occurs in an individual saturated with malaria, the fever is modified somewhat in its course, has more of the remittent type, and is apt to be protracted, owing to the occurrence of intermittents during covalescence."* Flint distinctly says that it is not a distinct type of fever. We may assume that Palmer does not recognize it as a distinct form, for even the name does not occur in his work on Practice; nor is it mentioned even by name in Roberts' Practice, in Quain's Dictionary of Medicine.

Among others who have attempted to prove its identity, are Hospel,† Ruff,‡ and Torres-Homem, of Rio de Janeiro.§ The author, following Torres-Homem, makes a great point of the fact that tympanites is either moderate or absent, and that albumen is rarely found in the urine. But tympanites may be entirely absent in genuine typhoid, nor is albuminous urine a constant symptom in all cases; though we cannot concede any affection which has assumed a *grave* typhoid state, without a somewhat albuminous urine.

The most recent advocate of the identity of typho-malarial fever is Webb, of Alabama.‖ He opens his paper with quotations from Drs. Woodward, Jerome Cochran, R. B. Maury and Johnson, none of whom, with the exception of

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Practice of Medicine. Third Edition. 1882.

†*Maladies de l'Algerie.* Vol. II.

‡*Arch. de Med. nav.* 1869. XII.

§*Estudo Clinico Sabu as fabres,* de Rio de Janeiro; *Arch. de Med. nav.*, 1879, Jan. XXXI.

‖Typho-Malarial a Continued Malarial Fever. R. D. Webb. *Am. J. Méd. Sc.*, April, 1883.

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Dr. Maury, advocate the hybridity or distinctiveness of typho-malarial fever, and he only in a mild way. After quoting from these authorities, Dr. Webb says: "These extracts may be taken as representing the contrariety of medical opinion upon this subject." We must confess that we are unable to see the "contrariety of medical opinion" in these extracts. In point of fact, few, if any, prominent English or American writers advocate the identity of this fever. Dr. Webb then says that "changes in the phenomena or types of diseases are admitted by all. Malarial fevers are not an exception to this rule. Within the last half century they have undergone such striking changes as to almost conceal their lineage. These changes are observable both in regard to their *habitat* and type." In admitting this change in type, we are far from admitting a transformation of type. Small-pox may rage in a locality for a time; then decrease or die out, and be succeeded by scarlet fever. There is a change of the type of eruptive fevers, but surely not a transformation of one type into another.

He quotes from a paper on "Malaria in New England," read by Dr. J. F. Adams before the American Public Health Association in 1881, in which the writer states that *fever and ague* were quite common in New England when it was first settled, but disappeared in the latter part of the seventeenth century, and did not reappear until about 1793. From this time they prevailed until 1799, when they disappeared for twenty-nine years. They prevailed again between 1828 and 1836. Between 1836 and 1850 no cases occurred. Since 1850, intermittent and remittent fevers have more or less prevailed in the New England States.

This description will apply to many localities, even States in the middle, southern and western portions of the Union. Until about 1858, intermittent and remittent fever had not appeared, or only in rare instances, in Piedmont region of Virginia, for many years. At the present time there is scarcely a county in that State, west of the Blue Ridge mountains, in which they are not common, though remittent is nothing like so prevalent as intermittent fever.

Dr. Webb, after giving the similar history of various portions of the country, continues: "These historical facts point to a change—a process of evolution—in the cause of these fevers, with a corresponding change in the phenomena of the resultant disease; yet it retains its malarial characteristics, and, though it resembles typhoid fever, is capable, by

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a proper differentiation, of being separated from it. If the opinion that malarial fevers are of a fungous origin be true, this change of characteristics in the poison—the contagium vivum—is altogether consistent with the operations of nature in the vegetable world." Here, he alludes to the fact that new varieties of plants appear under varying circumstances of drainage and culture; and that these influences are specially felt by the lower orders of plants, such as algæ and fungi. He asks: "Why may we not then have new varieties of malarial poisons, developed under varying circumstances? And if a change of poisons, why not an alteration in the characteristics of the resultant disease? The idea is not only consistent, but sustained by the admitted changes in malarial fevers in this country."

In the present state of the medical science, this question cannot be answered, either affirmatively or negatively. Those who contend for a fungous origin of malarial fevers, and who have something of a microscopic support for their views, hold that this fungus belongs to *animal*, not vegetable life. Union between animals of different species results in a hybrid, which is generally incapable of production. At all events, should such a hybrid arise, and be capable of reproduction, it would necessarily have distinctive features of its own, and these could be easily distinguished from those of its dissimilar parents.

Dr. Webb says again, after giving the details of two cases of fever: "The absence of diarrhœa, tympanites, or tenderness in the iliac fossa, and of the rose spots, also militates against classing it as typhoid fever. It is more properly classed as *continued malarial fever*." We can see no impropriety whatever in designating it by the last term; but why go further and call it *continued malarial* or *typho-malarial* fever? If he means that it is only a malarial fever which has assumed the low state commonly known as the "typhoid state," why not indicate it by the term "typhoidiform malarial" fever, as used by Corre? The latter intends, however, to designate by that term a distinct form of fever.

We must confess that we do not understand Dr. Webb's position. In the first part of his paper he seems to strenuously advocate the identity of typho-malarial fever; but at the close of this ably-written, but by no means conclusive, paper in which he at first seems to attempt to prove the identity of typho-malarial fever, he ends with this remark: "The natural conclusion, taking all the facts into consideration, is that they (the fevers described by him) are malarial fevers

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of a typhoid form, using the term typhoid, not in a specific sense, but as indicating a typhoid condition of the system;" which is a virtual admission that he does not believe in the identity of typho-malarial fever. To prove this identity it will be necessary to show a type of fever which is a true hybrid between typhoid fever and malarial fever; which shall have some of the characteristics of both fevers, and also certain characteristics not found in either one—just as the mule is a hybrid between the horse and the ass, possessing certain characteristics of each one of these animals, and yet with distinguishing traits of its own. This has not yet been accomplished.

The medical world now calls for a decision of this question of the identity of typho-malarial fever. The fact that the weight of authority rests with the negative side, seems only to bring forward more advocates for the affirmative. Why does not some enterprising microscopist try the experiment of breeding together select specimens of the bacillus malariæ and typhoid bacillus, and see whether or not the new created being will exhibit distinguishing characteristics of its own—whether, when introduced into the (unwilling) animal economy, it will produce a type of fever having characteristics found neither in typhoid nor malarial fever; and until that time we say, "Let the bacillus decide."

From M. Corre's chapter on *relapsing fever* we will only quote one paragraph (which will seem sufficient when we get to the end). He defines relapsing fever as "an epidemic fever observed under the influence of a particular medical constitution, to which paludism does not seem always foreign, and in conditions ordinarily giving rise to exanthematous typhus; a fever characterized by particular typhic phenomena, often accompanied by a bilious state, tendency to adynamia, relapses under the form of recessions at long intervals, the habitual existence of a spirillum in the blood, and frequently with hypertrophy and softening of the spleen." Any one attacked by a fever burdened with such a definition as this, must be in some danger. The most astonishing part of this definition, however, is the occurrence of the word "spirillum." After laboring for twenty pages to prove that the germ or parasitic origin of disease is a myth, the author makes the very existence of an important disease hang upon the existence of a "spirillum." For notice, it is in that respect alone—the *habitual presence of a spirillum*—that he makes any very wide difference between relapsing and some other forms of fever.

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In the face of this definition, when he comes to discuss the etiology of relapsing fever he says: "numerous writers have affirmed the existence of the parasite (spirillum), but we can not accept it as a cause of relapsing fever." He admits that they may occur, but affirms that they have no part or lot in the disease, and (in spite of his definition) that they are often absent. Under his discussion of the spirillum theory and spirillum inoculation, we meet with a novel and truly original argument. He says: "Motschutskowsky and Carter report examples of fruitful inoculation with blood from persons sick with relapsing fever, but these experiments do not *accord with preceding* experiments (our italics)." It is necessary, then, for the success and proof of an experimental investigation, that all subsequent experiments should accord with the first, whether that be a failure or a success. This is putting the matter in a new light, and will doubtless be of great value to science; much valuable time will be saved, as henceforth it will only be necessary to make an experiment and let a theory stand or fall on its results.

As to the occasional absence of spirilla in the blood of relapsing fever, Crudeli (quoted above) states, regarding the bacillus malariæ, that the organism can always be found in the blood during the period of invasion of the fever, but disappear afterward, and then only spores can be detected; an explanation which, there is every reason to believe, will hold good for relapsing fever and its organism. But the author can see no causative relation in this appearance during the fever; he says that at this time the circumstances are favorable to their production, and they develop; circumstances are unfavorable during the decline, and they disappear—a truly remarkable argument.

The treatment of typhoid fever is summed up by him in a few words: 1. Debilitating remedies should not be employed; the system should be kept in a condition to resist the debilitating effects of the disease, and the tedious convalescence by tonics—chiefly alcoholic—and complications should be met as they arise. 2. It is sometimes necessary to prescribe sulphate of quinine to combat the paludal manifestations. 3. It is frequently necessary to build up the system after the great shock, and when convalescence seems to degenerate into an anæmic state. Though no mention is made of the potent spirits of turpentine to combat tympanites, or baths for the hypyrexic state, etc., the above quotation forms the groundwork for the proper treatment of the disease. He should have added, though, what is of primary importance,

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that the great secret of successful treatment of typhoid fever is "Hands Off!" With regard to alcoholic stimulation, he should have added, also, that it should be employed but sparingly, except when there are indications of heart failure. No mention is made of the so-called specific remedy of the Germans—mercury and iodine. A more serious omission is the neglect to urge the great importance of disinfection of the stools and protection against emanations from cess-pools, drains, etc. While we have no positively incontrovertible evidence that the disease may be propagated by infection from typhoid stools, the weight of authority is on that side, and it is the part of the wise practitioner to provide against every source from which the disease may originate. The dejections from the patient should be disinfected with a solution of sulphate of iron and carbolic acid, or chloride of zinc, and *buried*—not thrown into a field or privies; and articles of clothing which had been soiled by these dejecta should be disinfected and plunged in boiling water at once.

Too much stress cannot be laid on sanitary precautions against typhoid and malarial fevers, and the State societies and boards of health in the United States are now beginning fully to realize that fact. Dr. Mallette reports* the following instructive case occurring in Boston, Thomas county: "Families using water from the same well, had for several years suffered from malarial fever, every year, until an application six inches deep of charcoal for several feet in the circumference of the well. Since that application fever has disappeared, and they have been exempt for the past four years." In many cases the deaths from preventable diseases are the result of sheer negligence. Such negligence on the part of railway officials, resulting in injury or the loss of life cause sensations, and have to be paid for; but preventable diseases, destroying more lives and causing greater pecuniary loss in one year than all the railway accidents in twenty, are in many cases allowed to continue their ravages without molestation.

The Lambton Mills (Canada) Commission, in the outbreak of typhoid fever in that village, after a careful examination of the facts, were justified in sending the following conclusions to the Board of Health: 1. To have an analysis made of the water of the several wells, and if impure, to proscribe its use until the several wells have been thoroughly cleaned, and in the meantime to use other water from known healthful sources. 2. That in view of the excreta from the privies

* Trans. Med. Assoc. of Georgia for 1882, p. 83.

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(situated about fifty yards from the houses and not so far from the wells) being possible sources of contagion, it would be advisable to have them disinfected by solution of sulphate of iron, and thereafter removed, and to have some form of dry earth system adopted hereafter. 3. That measures be taken for the immediate removal, before decomposition, of offal from the offending slaughterhouse; or the removal of the slaughterhouse itself from the village to some location at such a distance from it as would make danger from noxious effluvia impossible.

The sample of water from the Mills showed, on analysis, 9.2 grains of chlorine to the gallon. C. B. Fox, an authority on water analysis, says: "As urine and sewage contain a large amount of chlorides, the presence of five or ten grains of chlorine is a suspicious circumstance in such localities. Good, natural waters contain on an average from .7 to 1.2 grain per gallon." Though no organic matter was found in the water analysed, the Commission did not think this entirely reassuring, as it may be possible for urine and slop-water percolating through the soil to lose much of their organic matter, and still retain chlorine and typhoid germs. In proof of this they instance the case of the epidemic at Lausen, Switzerland. In that case the contaminated water of an adjacent valley, after percolating through the gravelly hill intervening between this valley and the public reservoir, still retained its chlorides, and its potency to cause an epidemic of typhoid fever, though no trace could be found of granules of the finest flour which had been mixed with it.

With all the light that has been set before us, too little attention is paid to sanitary arrangements for the prevention of typhoid fever and other preventable diseases. Local and State Boards of Health are doing good work in many places and States, but there are still some States which have no Boards of Health, and little or no attention is paid to sanitary principles by the Medical Societies of those States. Year after year people are carried off by these preventable diseases, and yet the people, the legislatures, and even the physicians seem to have been lulled into a fatal apathy while the disease goes on with its terrible work. Even from a pecuniary point of view the annual loss to a State by preventable diseases is enormous, not only by deaths, but by sickness, for there are always many sick persons to one who dies. This enforced idleness from sickness is a heavy loss. "If," as says the Hon. Erastus Brooks,* "to this result the money

* What the State Owes the People—Public Health is Public Wealth.

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value of life is counted, the five or six thousand lives yearly saved will run into some millions of dollars. The neglected preventable deaths in England and Wales during the school period, apart from infant mortality, makes a loss to the State of $95,000,000. For every death there were as proved on careful investigations by the government, two persons always sick and disabled, thus making a loss for each death of 730 days in each year." By the side of these figures the cost of a Board of Health for every State in the Union, at $100,000 (!) each, would be a trifle. And yet there are certain of our legislative Solons who, penny-wise and pound-foolish, think that Boards of Health, sanitary measures, and sanitary laws are useless and a waste of money.

Yellow fever, its nature, causation and treatment, has been and is a question of vital interest in many of our Southern States. Its wholesale ravages in Memphis and the adjoining country in 1878, awakened a livelier interest in it, if possible, than before, as shown by the numerous papers in the medical journals and society transactions which have constantly appeared since that time. The Yellow Fever Commission, sent to Havana to investigate its nature, though it has done good work, has failed to throw much light on the subject.

In his discussion of its etiology, Prof. Corre considers the disease as emanating from what he calls *yellow fever foci*. The foci he classes under three divisions: 1. The Mexican focus, including the region between Florida and Yucatan, and embracing the islands in or near the Gulf of Mexico. 2. The Brazilian focus; and 3. The African focus, situated on the western coast of Africa. He considers these foci as being the great centres in which the disease orignates, and from which it is carried to other places where the conditions are favorable for its further propagation. As to its etiological conditions, he claims that a *littoral soil* is necessary for its development—not a *paludal* soil; in other words, it will not originate away from the sea coast. All the endemic foci are maritime, and even the epidemic foci are more usually situated on the sea coast, or else large rivers. As to the geological constitution of the soil, he appreciates the difficulty of establishing a relation between that and a disease development; but states that it seems to originate in localities having the two extremes of geological formation—modern alluvial earths (such as are found on the Gulf of Mexico and the northern portion of South America), and igneous earths (as in the Antilles, Brazil, and the west coast of Africa). He thinks that there is some relation between oceanic currents

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and the spread of yellow fever, recording the fact than an epidemic at Pérou, in 1868, coincided with a reversal of Humbold's current, which influences a greater part of the western coast of South America, and even thinks that earthquakes have a hand in originating the disease. This is going rather too far. We grant his telluric influences; his ocean current theory has an appearance of plausibility; his theory that violent electrical discharges, by purifying the atmosphere with ozone, may possibly under some circumstances be true, but we cannot swallow the earthquake theory. Earthquakes are responsible for enough sins already, without saddling them with this fiendish outrage. The question of the influence of elevated temperatnre, season, sociological, ethnological and individual influences are sufficiently discussed elsewhere.

We pass over his discussion of the development of yellow fever by *transmission*, to *spontaneous development*. It is transmitted from the foci of original development; but how does it get to the foci? This question he does not answer, but the weight of authority is against its spontaneous development.

As to the nature of the yellow fever agent, he, with the rest of the world, is in the dark; but is inclined to deny that any germ is the causative agent. But, he says, since he does not know what it is, he prefers to say so, and not cloak his ignorance under a more or less hazardous hypothesis. This is well, but after reading some of the astonishing hypotheses set forth in the earlier pages, we do not see how adherence to even a very hazardous one could damage him at this late stage in the book.

The most interesting pathological alteration in yellow fever, and which so far as we can ascertain has not been mentioned by any English (American) writer, is the fatty degeneration of the blood-vessels, extending to the capillaries. Some American writers mention a parenchymatous and fatty degeneration of the myocardium, but say nothing of similar alterations in the blood-vessels.* This was first announced by Crevaux,† is referred to by Corre, but more fully quoted and elaborated in a masterly paper by Carlos Finlay.‡ He

*Riddell, da Costa, la Roche, Lyons and Jaccond testify to the fatty degeneration of the heart, but the American Commission deny this pathological change. Vincente de la Guerdia. *Revista dé Med. y Cirurgia*, 7th April, 1882, No. 139, p. 306.

† *Archives de Médicine Navale*, 1877, t. II, p. 125.

‡ *Nota present. en la Real Academ. de Ciacias Méd., Fisicas y Naturales de la Habana*, August 29, 1882. Reprinted in *Cronica Médico-Quirurgico de la Habana*, Vol. IX, 1883, Nos. 2, 3, and 4.

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states that though Crevaux was the first to describe this lesion, Blair pointed out, in 1852–53, a fact nearly related to the discovery of Crevaux, viz: the presence, in the yellow fever *vomita*, of fragments of the capillary vessels. Blair may possibly have mistaken fragments of the gastric tubules, which are also seen microscopically in the sediment of black vomit, but since that time Crevaux, Gama Lobo, and Corre* affirm that they have seen these fragments, as well as those of the gastric tubules. Though admitting that the blood corpuscles escape through the vascular walls, the fatty condition of the walls of the blood-vessels must be the chief factor in explaining the numerous ecchymoses, apoplectic extravasations which Corre, Crevaux, Gama Lobo and Finlay assert as being constant in the brain and other organs of persons dead of yellow fever, as well as explaining the great quantity of blood which, escaping from the vessels, is thrown out either from the stomach or bowels. They also state that capillary stasis occurs, followed by thrombi arteriolis, due either to mechanical effects or to the pathological condition of the vascular walls already mentioned. May not this stasis be in a great measure the result of the fatty or granular change in the cardiac walls, so that it is no longer able to force the current of blood through the capillaries? Would not this fatty condition of the capillaries, by being a factor in the causation of the apoplectic extravasation found in the organs generally, and the brain more particularly, be a more logical explanation of the cause of death in yellow fever than any which has yet been offered?

The assertion that capillary stasis occurs, that the heart capillaries and vessels generally undergo fatty degeneration, and that thrombi and extravasations result is borne out, says Finlay, by the clinical phenomena:—increased globular contraction from the second until the fifth or sixth day of the disease, progressive depression of pulse, albuminuria, peripheric pallor, hemapheic icterus, passive hæmorrhages and the ease with which they are produced, by friction on the gums, and in leech bites, the renal, hepatic, pulmonary and cerebral complications, and above all, the gastric symptoms in the last stages, and finally the gangrenes and furuncular eruptions, with other symptoms of a hæmorrhagic character which are common during convalescence.

The author believes that emetics are indicated in the *early treatment of remittent fever;* that the gastric and other abdominal and general symptoms indicate their use, and that

* As quoted by Finlay, De l'Etiologie et Prophylaxie de la Typhus Amaril (Fièvre Jaune), Arch. de Méd., Navale, 1882.

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they frequently allay, after acting, the gastric irritability by what he terms a substitutive action, and in this way will often insure a tolerance of the specific remedy—quinine—and further, that evacualents tend to moderate the febrile phenomena. North American writers do not, as a rule, endorse the use of emetics, but declare that the irritability of the stomach is a contra-indication to their use. There are many experienced practitioners in the Southern States of the Union, however, who firmly believe in the administration of an emetic previous to the administration of quinine, on principles similar to those laid down by the author, who is supported by L. Colin. If the gastric irritability is due to the presence of undigested food, it may be naturally inferred that when the offending substance is removed, the irritability will be lessened or cease altogether, and its prompt removal is indicated. If constipation exists at the same time, the emetic will, by causing compression of the gall-bladder and the expulsion of bile through the action of the adominal muscles, tend to relieve that symptom, beside tending also to relieve an overdisturbed liver. Though expressing this view, the writer by no means advocates a routine employment of emetics; they would scarcely ever be justifiable in *severe*, and certainly never in the *grave* form of the disease.

In holding that quinine should be given preferably in the stage of remission, the author is supported by the soundest of American therapeuticians. There really seems to be no indication for giving small and frequently repeated (grs. v every four hours) doses of quinine in remittent fever. This medicine is rapidly eliminated from the system, appearing in the urine three hours after administration (Bartholow), and if the treatment by small doses be extended over twelve or eighteen hours, it is seen that the first doses have passed out of the system long before the last are given. Indeed it is a disputed question whether the giving of large doses is not more efficacious in intermittent fever. If given in large doses then, it should be given, if possible, in the stage of remission. But we should not wait for a remission; the remedy should be given at once. M. Corre's doses, however, are rather small. He gives, in the mild form, grs. viij–xij, and grs. xv–xxx in the grave, these doses being continued for three or more days. Bartholow advises grs. xxx the first morning, grs. xx the second, grs. xv the third, and grs x the fourth —in single doses.

The quinine may be administered by the mouth, per rectum, or hypodermically. For the oral or hypodermatic

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method, the bisulphate of quinine is preferable to all other preparations, except, perhaps, the muriate (quiniæ hydrochloras), with which the writer has had no experience. Its strength is equal to that of the sulphate, it is far more soluble, and unquestionably less irritating to the stomach, and therefore less likely to be rejected. Its chief advantage over the sulphate for hypodermic administration, is that it is far more soluble, dissolving readily in pure water. It would also seem that the subcutaneous use of it is less likely to be followed by abscesses than in the case of the sulphate. The writer has seen as many as five separate injections made upon one patient within a few hours, without a single abscess or other local phenomenon. This may be attributed in great part however to the fact that after the medicine was added to it in a spoon, the water was brought to the boiling point immediately before the injection.

As to the use of purgatives in remittent fever, the author believes that they are indicated;* the congestion, the organs of the portal system, the distention of the colon generally with fæcal matter, and the cerebral symptoms, often dependent in a great measure upon the state of the intestinal canal, clearly indicate, in his opinion, the use of purgatives. Of these he prefers calomel in small doses followed by salines; what salines he does not say, but gives the dose at about ʒj. This is rather too indefinite. We should hesitate to order ʒj of "saline cathartic" for a patient with remittent fever. Large doses of calomel are to be condemned in these cases; gr. j–ij, followed at a suitable interval by a saline aperient or cathartic, will produce the desired effect with much less damage to the patient. Bérenger-Féraud, Bastion, and Gabon place great reliance in the use of opium in remittent fever to shorten the paroxysmal stage and dissipate the saburral state. The author cannot endorse their views; though he values it in checking the nausea and vomiting so often met with. Strange to say, though, he says nothing of the hypodermatic use of morphia with this indication, though so much has been written of the value of morphia subcutaneously, preferrably with atropia, for the relief of nausea. He rarely employs cold applications, except when indicated, locally in intense headaches; and effervescing mixtures, so pleasant and often valuable, are entirely unnoticed.

Hæmaturic, Melanuric or Hæmoglobinuric (bilious) *Fever* does not seem to have had a special place accorded to it in

* It should be remembered that M. Corre treats of the disease as seen in tropical climates.

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our Anglo-American nosology. Those writers who mention it at all, usually give it from one-half to one page, some under remittent, others under the subject of intermittent fever. M. Corre, however, considers it of sufficient importance to occupy about 110 pages in his work. Of the forty-five or fifty books and articles referred to in this chapter, all are from French writers, though some excellent articles on this subject have appeared within the past two years in the Spanish (including South American) journals. In English works, as the author remarks, this form of fever is not distinguished from remittent or bilious remittent fever. The fact is, the hæmorrhagic variety or form of remittent fever is not mentioned by some English and American writers; and the whole subject has been rendered very obscure by the formidable list of synonyms, which, from time to time, have been added to by different writers, *e. g.*, *atrabilious fever*, *grave bilious*, *bilious remittent with hæmaturia*, *icteric*, *pernicious icteric*, *ictero-hæmaturic or nephrorrhagic*, *sporadic yellow fever*, *etc.* The multiplicity of names for one affection, or for a variety of a disease, has been the cause of endless confusion. In some cases it is almost impossible to know what a writer refers to, when he selects, at random, a name which might apply to half a dozen affections. The International Medical Association might confer a boon upon the present and future medical world by adopting some nosological classification.

The author seems to define bilious remittent as a pyrexia characterized by: (1) Its tendency to the remittent or continued type; (2) An *ensemble* of phenomena which answers to the bilious state; the more or less early appearance of icterus, though rarely beginning before the third day, afterwards of medium intensity, always accompanied by bilious urine in aspect and reaction, sometimes albuminous, though feebly as a rule; (3) By the frequent development, in grave forms, of hæmorrhagic and typhoid manifestations which often coincide with the diminution or disappearance of the bilious phenomena; (4) By an evolution more prolonged as the case is more severe; and (5) By its appearance indifferently in all paludal regions, and in alcoholic subjects. This general formula of remittent fever is given in order that he may show wherein hematuric bilious fever differs from it; for he considers the affections as distinct diseases.

The characteristics of this fever are, according to M. Corre: (1) Habitual intermittent or remittent type; (2) The association of true bilious symptoms with certain hemapheic phenomena; an icterus ordinarily intense, of early appear-

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ance, and coincident with the appearance of albumen in the urine, the urine being red or black, with reaction of hemoglobin, but not of biliary matters; (3) A moderate tendency to the typhic state, a rapid evolution in grave cases, terminating in the majority of cases by collapse or malænic intoxication; (4) Its appearance in certain paludal regions, and only in certain subjects already under a malarial influence.

After reviewing at some length the clinical phenomena of hæmaturic remittent fever, he gives a table of differential diagnosis between that form and what he terms bilious remittent or intermittent, but from which it does not appear that there is any difference, other than the fact that the hæmaturic form is a severe type of remittent fever. The degree of jaundice—very marked in the hæmaturic form—can scarcely be admitted as a differentiating factor, seeing that it occurs in all degrees in remittents, though Jaccoud has attempted to classify cases in which there is very marked biliary derangement under the head and distinct class of *pernicious icteric*. Nor do albuminuria, hæmaturia and suppression of urine entitle the hæmaturic form to a distinct place. Every degree of hæmaturia may occur in the course of ordinary remittent fever, as may albuminuria and partial or total suppression. When these renal troubles are prominent, it is customary and proper to say that the case is a *nephritic* form of remittent or intermittent fever, or, as they occur, as a rule, only in the very grave or *pernicious* form, nephritic form of *pernicious* remittent or intermittent fever. A common form of pernicious intermittent is that in which the nerve centres are primarily involved, but there is no good reason for erecting this into a distinct class under the name "comatose intermittent fever."

Nor does the author's pathological anatomy bear out his attempted classification of hæmaturic remittent as a distinct class of fever. It is simply the pathology of remittent or intermittent fever, with the exception that the renal changes are not those of every case of remittent or intermittent; hæmaturia and albuminuria do not occur in all cases.

On the whole, it is difficult to define the position which should be accorded this book. Certainly it is one which would be dangerous in the hands of a student. But, in many respects, it is a valuable addition to our knowledge of the fevers occurring in tropical climates, and of the phases and severities of which a dweller in the temperate zone can have so little conception. The descriptions are elaborate, and it appears that the author has seen and studied what he

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describes. Its two faults are, attempted refutation of a theory—which at least has some basis, the probabilities being immensely in favor of it, and some of the most scientific microscopists of the present day having signalized their belief in it—by unscientific assertions, and a persistent effort to still further confuse our chaotic nosology by the erection of new classes or types of disease. Both are grave faults; but, with their exception, the book is a good one and very interesting.

Analyses, Selections, etc.

Relations between Physicians and Pharmacists.—R. H. T. Nesbitt, of Leavenworth, Kansas, contributed the following letter to the *Druggists' Circular and Chemical Gazette*, May, 1883, which we have been requested to reproduce in our columns, with which request we very cheerfully comply. The subject ought to engage the attention of every practitioner and lead him to greater caution.

"As a thoughtless remark by a physician to a patient, or to the family or relatives of a patient, may occasion the pharmacist much trouble and annoyance, I desire to mention two instances where a want of a little consideration on the part of the doctor caused me some trouble, unpleasantness, and in one case considerable expense; for I believe that if the attention of physicians were called to this they would endeavor to be more careful. No doubt, in the majority of cases, these remarks come more from a want of thought than from any intention to injure the druggist.

About four years ago I dispensed the following prescription for a youth of about fifteen years:

Sulphate of quinine	40 grains.
Syrup of ginger	1 ounce.
Comp. tincture of cardamon	3 drachms.
Tannic acid	8 grains.
Distilled water	½ ounce.

Mix. Directions: A teaspoonful every two hours; four doses when without fever.

I used sulphate of quinine from an original ounce bottle. During the night following the parents of the boy, thinking that he was worse, called the doctor, who upon seeing the patient immediately declared that the druggist had made a mistake, and put morphine in instead of quinine. The boy

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died shortly after, and of course there was much talk. Before evening the whole city knew of it. I was confident that I had made no mistake, and that the boy must have died from some other cause, for I have always kept the dispensing bottles of morphine and all other poisons in a locked closet. However, I had the father of the deceased deliver the mixture to the chemist of the State University, who analyzed it, found the quinine and the aromatics, but not even a trace of morphine nor any other poison. The doctor afterwards gave me a written statement that he believed the mixture was correctly prepared. After this the parents and the public seemed perfectly satisfied, for my prescription business immediately improved and has continually increased. The family patronize me yet, and I prepare their prescriptions, but they have never had that doctor again. Strange to say, that physician has been my bitter enemy ever since.

The second case was not so serious, but nevertheless unpleasant. Two weeks ago to-day one of my assistants was asked for an adult dose of calomel and rhubarb. He gave ten grains of each mixed. It was administered to a lady who was feeling ill; some time after taking the powder, about two hours, she got so bad that they called a physician, who observed the following symptoms: cramps in the hands, difficult breathing, dilatation of the pupils, vomiting, no operation, pain in the stomach. He asked for the spoon with which the medicine was administered, when he stated, that although it smelled of rhubarb, it did not taste like it, and that something else must have been given in place. Of course the lady became very much alarmed that her precious life had been in such danger, and blamed us in no very mild terms for inexcusable carelessness. After explaining to the doctor that such a mistake was impossible, and showing him that nothing more dangerous than calomel was in the prescription case, he admitted that he did not know what drug would produce such effects. He tried to set matters right with the patient; but it is a delicate matter. Physicians, like other men, dislike to admit their mistakes. The patient was all right the next day. The gentleman who dispensed the powder I have known for seven or eight years; he is a graduate of the Philadelphia College of Pharmacy, is a good chemist, and one of the most careful and critical dispensers I have ever met, and I have been constantly in the business for seventeen years.

In this case none of the powder was left, and had the patient happened to die, an examination of the stomach would

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have been necessary, and all this trouble, expense, uneasiness, loss of time, and damage to business occasioned, not from any fault of ours, but from a hasty, unguarded remark of the physician. There is hardly a week that I have not to see some physician about an error of some kind in his prescription. Sometimes it is an omission, at others an overdose, and again one ingredient is written when another is intended. But every druggist who has much prescription work must be familiar with these things. I would like to ask the doctors how would it sound if the druggist were to exclaim on reading the prescription, 'Ho! the Dr. has made a big mistake here; if I were to put this up, it would kill you! I shall have to go and see him about it.' No, so far as I can learn, that is not the druggist's way of doing it. He politely says to the customer, 'The prescription will take an hour to prepare; if you cannot call back, we shall send it for you.' Then he quietly slips out the back way, and interviews the writer of the prescription, who, if he be a gentleman, treats him civilly and corrects his mistake; but I am sorry to say this is not always the case. It seems to me the physicians should keep their mouths closed until they have carefully examined the medicine, to make sure whether there has been a mistake or not, and also see the dispenser, before making such serious assertions.

'I know of other pharmacists that have been harassed in a similar manner."

Coca, Virburnum and Celery, with Notes of Cases.—William B. Hazard, M. D., Professor of General Pathology and of Diseases of the Mind and Nervous System, St. Louis College of Physicians and Surgeons, formerly Superintendent and Physician to St. Louis County Insane Asylum, etc., in the June number, 1883, of the *Medical Brief*, says some things regarding this combination of drugs which induce us, more than ever, to believe that there is virtue in it.

Erythroxylon Coca is a shrub of South America. The leaves are used as a nervous stimulant or tonic. A large amount is collected annually and preserved by being dried in the sun. They are oval in shape, about two inches in length, and have a bitter and pungent taste when green; when dried, they taste like Chinese tea. The natives' method of use is by chewing the leaves mixed with a little ashes of lime. The leaves contain coca-tannic acid, a variety of tannin which gives a green reaction with salts of iron; cocaina, a fixed, crystallizable alkaloid which benumbs the tongue

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and has a bitter taste; and hygrina, a volatile alkaloid, pale yellow in color, oily in consistence and possessing an alkaline reaction and a burning taste.

The physiological actions of coca upon *animals* are as follows: In small doses it dilutes the pupils, causes hyperæsthesia and loss of co-ordination of movements. In medium doses, it lessens, and then abolishes sensibility. In large doses it produces tetanic convulsions. In *man* it prevents fatigue and enables the user to perform more labor with less exhaustion than would otherwise ensue. South Americans, at the time of the Spanish conquest, claimed for it a divine origin. This caused the conquerors to interdict its use; but these religious scruples gave way before the fact that the enslaved populace could perform much more labor with than without it. The results of experiments made in this country are that coca retards, in some way yet unexplained, tissue metamorphosis, and consequently diminishes waste, while, at the same time, it stimulates the nervous system without subsequent ill effects.

The medicinal virtues of coca are faithfully outlined in its physiological action. It is indicated in all functional affections in which it is a desideratum to prevent waste of muscular or nervous tissue. In all such conditions this agent becomes a valuable aid to conservative medicine. More effective than tea or coffee, and devoid of the pernicious properties of alcohol or opium, it gives the patient a respite from suffering, and the physician *time* to obtain the reparation of worn-out physiological units of the organism through the agency of improved nutrition.

In the treatment of the alcohol and opium habits, coca has proven invaluable. Nervous exhaustion, whether superinduced by too prolonged brain-work, business worry, or excesses in venery, finds in coca a valuable help towards a restoration. In convalescence from acute diseases, this becomes a valuable aid by hindering excessive waste, and giving time for the digestive organs to supply new material for the exhausted organism.

A large class of cases require something more than a nervous stimulant, although the principal symptoms are those of nervous exhaustion. Reference is here made to those instances of disease, which in the female are accompanied with pelvic pain, and, in the male, with urethral and prostatic hyperæsthesia, and in both sexes with depression of spitits amounting to hypochondria reaching almost to melancholia. These cases require a sedative effect, especially over the re-

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flex apparatus of the genito-spinal and abdominal sympathetic systems.

The varieties of *Viburnum* (*V. opulus* and *V. prunifolium*) have the power of reducing hyperæsthesia and reflex excitability in these directions. Ovarian neuralgia, tending to abortion and dysmenorrhœa in the woman, and prostatorrhœa, psychical impotency and numberless symptoms of exaggerated irritability of the sensory nerves in the man, are happily relieved by preparations of *viburnum*.

Celery (*Apium graveolens*) has long been recognized as possessing strong powers as a diuretic, at the same time controlling irritability of the bladder, and exerting a most beneficial influence over headaches of a nervous origin. As a soothing agent in sleeplessness originating in over-work, and as a stomachic tonic, when taken in moderate quantity after meals, aiding in digestion and assimilation, popular favor has long since marked it out as "a friend in need" to the nervous dyspeptic as well as to those whose appetite tempts to over-indulgence at the table. Celery, when taken in substance, or if the stalks are not properly blanched, often acts disadvantageously, especially if it is hastily swallowed without proper mastication. This may be avoided by the use of a fluid extract. The bane of American life is dyspepsia, which has gained recognition as *the* American disease. Good cooking and sufficient mastication of food would do much to overcome this national enemy. But we have to take things as we find them, and the average American has to have a stomachic stimulant or tonic furnished him to overcome the effects of a bad *cuisine* and worse habits as regards the pursuit of business as well as ingestion of food. In Richardson's "Celerina" we find a combination which very fairly meets the requisites hereinbefore pointed out. As a tonic and soothing agent, acting primarily upon the digestive and genito-urinary systems, and as a modifier of the nutrition of the nerves supplying the pelvis, it is, theoretically, well calculated to meet a large class of indications. Practically, it has proven itself worthy of a more extensive trial than it has yet had from the medical profession.

My own experience with "Celerina" has, thus far, been rather limited. In two cases of *dysmeorrhœa*, accompanied with ovarian hyperæsthesia, due to excessive child-bearing and overwork at the wash-tub, and consequent loss of appetite and emaciation, "Celerina" afforded marked relief. These were charity cases, and consequently not very favora-

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ble subjects for treatment. Under better circumstances, I am satisfied that permanent relief would have resulted.

A case of the most marked *nervous exhaustion, consequent on prolonged masturbation*, resulting in temporary impotency, was referred to me by a physician in Central Texas, in the summer of 1882. The patient was a very intelligent gentleman of thirty-two years of age; single; hypochondriacal, and low-spirited almost to the verge of suicide. Treatment by strychnia, phosphorus, laxatives and local applications to the neighborhood of the prostate gave him no relief. Cold baths and a general tonic regimen were equally without result. He was finally given two pounds of "Celerina," with directions to take two teaspoonfuls after each meal, which were faithfully carried out, and a cure was effected. The first result to be achieved in the treatment of such a case, is to secure complete abstinence from the vile practice. This is often beyond the enfeebled powers of the patient, unless he has proper medical aid. I think the effects of viburnum in this regard, by soothing the urethral mucous membrane and counteracting the "irritable weakness" of the genito-spinal center, may be safely relied upon in cases where there is any amount of will-power available.

In a second case referred to me in October, 1882, by a physician of Southern Kansas, there was less marked hypochondria, due to indigestion, constipation, and lack of outdoor exercise. Here a proper laxative, horseback exercise, and regulated diet produced some improvement; but the mental depression was not relieved until the second eight ounces of "Celerina" had been nearly exhausted.

In February of this year, an old gentleman from Southern Arkansas, the subject of attacks of *melancholia* recurring every two or three years, presented himself to me for treatment. His attack was marked by no definite delusion, but by such a profound depression of spirits that he could scarcely refrain from committing suicide whenever the surrounding circumstances would give him an opportunity to take his own life. Although a man of wealth, he feared impending poverty, at the same time recognizing the folly of such fears. Laxatives, cannabis Indica, bi meconate of morphia, and a hydro-therapeutic course did him no good. He greatly improved on "Celerina," and at last accounts seemed fairly on the road towards recovery. His digestion and sleep were greatly improved by this preparation, and I consider it aided to make his condition more tolerable; at the same time I

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believe he would have recovered, as he had on three previous occasions, without much medication. It is possible, however, that he avoided commitment to an asylum by the use of the medicines prescribed.

The excessive wear and tear of the muscular system during an attack of *chorea* and after rapidly recurring epileptic paroxysms, as well as during delirium tremens, would doubtless be diminished by the judicious use of this valuable agent.

I trust the profession will give this combination a fair trial in properly selected cases. I know the honorable character of the manufacturer, and that reliance can be placed implicitly upon the purity and genuiness of the agent entering into its composition.

Antiseptics in the Puerpera.—Prof. F. L. Sim, M. D., of the Memphis College Hospital, in a recent issue of the *Mississippi Valley Monthly* says: "We have for some time past given our preference almost exclusively to 'Listerine' as an antiseptic in the puerpera. We think it has *real* advantages over any other, while it certainly is much more acceptable to the patient. The object to be attained in the use of vaginal washes after confinement are, first, to secure cleanliness; second, to arrest and prevent putrefaction; and last, but by no means least, to promote *early*, healthy action in the lacerated soft parts—the channel through which septic matters may be absorbed. The importance of this early reparative action cannot be over-estimated, as it is a well-known fact that with the healing process once begun, septic virus is repelled, in lieu of being absorbed, as is the case before healing begins, or when the abraded surfaces have taken on unhealthy action. We had long employed carbolic acid for the purposes above enumerated, but observing disagreeable constitutional influence from its use, we selected the 'Listerine," which has proven a powerful non-toxic antiseptic, promptly promoting the reparative process, and substituting an agreeable perfume for a noxious odor."

[The Editor of the *Virginia Medical Monthly*, has, for many months, been using "Listerine" in his obstetrical practice especially, and thinks he will benefit some practitioners and their patients by again calling attention to it. It may be used as a vaginal wash in varying degrees of dilution to suit individual need. Whatever views may be gaining hold of the professional mind as to the *general* uses of antiseptics, nothing yet said has shaken our confidence in their value in child-bed.]

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Editorial.

Personals, Briefs, Items, etc.—*The Fourteenth Annual Session of the Medical Society of Virginia* will convene at the Rockbridge Alum Springs, Va., at 8:30 P. M., Tuesday, September 4th, 1883, and will be in session three or four days. It will be an important session to the Society in that its Constitution, By-Laws and Resolutions for the government of the organizaton generally will be considered. It will be a session of more than ordinary scientific interest because of the promise of papers from men—both in and out of Virginia—able to contribute valuable material to medical literature. It will be an economical gathering in view of the generous offer of the Springs Company to make *no* hotel charge to Fellows and Delegates who may be in attendance; and also because the Railroads generally have greatly reduced the rates of travel, as announced in the circular of the Executive Committee just distributed. It will be a recreative meeting to those in need of rest, as these Springs, for a long period of years, have ranked among the first of medical importance in the State. It will be an enjoyable entertainment because the efficient management will see that all is well. We know of no subject to be brought to the attention of the Society that ought, in the slightest degree, interfere with the harmony of the session. In view of these and other reasons, we trust there will be an unusually large "turn-out" of the profession of this State, at least; and we hope to meet visitors from other State Societies. For a fuller announcement, let those of our Virginia subscribers, or those who may be the appointed delegates from Societies outside of the State at once address the Editor of this Journal (who is the Recording Secretary of the Society), for an Announcement of the session. We urge every regular practitioner in Virginia to join the Society, and thus lend the weight of his influence to the proper development of the profession of his State.——*The Journal of the American Medical Association.*—The first number of this weekly publication of thirty two large pages, which is the official organ of the American Medical Association, was issued July 14th. This *Journal* not only takes the place of the "*Transactions*" as formerly issued, but has all departments belonging to regular medical journalism. As it is to be *the representative* medical journal of America, contributors to its columns should be specially careful in the preparation of their articles. In the discussion of medico-political ques-

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tions, the Editor, we are confident, will exercise due prudence as to the use of parliamentary language, etc. This first issue shows that the Associatien has not misplaced its trust in electing Dr. Davis as Editor-in-chief. He is aided by a well-selected corps of Assistants. Subscription price, $5 a year. Those who are members of the American Medical Association, should send this amount to the Treasurer, Dr. R. J. Dunglison, Philadelphia, Pa.; those who are *not* members, who wish to subscribe, should send this amount direct to the "Journal of the American Medical Association, 65 Randolph St., Chicago, Ill."———*The Atlantic Journal of Medicine and Surgery* is the title of the new journal about to be begun in this city. It is to contain sixty-four pages monthly, and the subscription price will be three dollars a year. Drs. R. B. Stover and H. G. Houston are to be the Editors. Both of them are gentlemen of professional merit, and one of them has gained far more than a local reputation beeause of the value of articles contributed to other journals. We sincerely hope the new journal success, and most gladly place it upon our exchange list.———*St. Louis Medical Society on the Code of Ethics.*—We very cheerfully insert the following eard: "On June 23d, 1883, Dr. Atwood introduced the following, which was adopted by the St. Louis Medical Society, after some considerable discussion:

"*Whereas*, At the recent session of the American Medical Association, a preamble and resolution were offered for the consideration of said Association, purporting to represent the sense of the St. Louis Medical Society upon the propriety of preparing a new code of ethics, or altering and changing the existing code in accordance with the present relations of the profession, and

"*Whereas*, In said preamble the assertion is made that, 'the code has accomplished all it was designed it should, but at the present many of its features are obsolete and not adapted to our wants. The necessity of an early revision is very apparent, is loudly called for in all parts of our land, and cannot be repressed much longer. * * * The time has come when the loud and very soon universal call will have to be heeded;' and

"*Whereas*, The St. Louis Medical Society did not instruct, 'That the Committee be authorized to prepare a code of ethics which in their view will meet the wishes of the profession, and submit the same to the meeting of 1884;' therefore,

"*Resolved*, That the St. Louis Medical Society distinctly repudiates the statements contained in said preamble and again expresses its fealty to the existing code of ethics as a time-honored and most suitable fundamental law of the profession, and specially deprecates any action calculated to reflect upon its loyalty to those principles which have heretofore secured immunity from the machinations of schismatics within or enemies without.—A. H. OHMANN-DUMESNIL, M. D., Rec. Sec."

What better text could be wanted to prove that there are differences of opinion in the St. Louis Society regarding the "code of ethics?" Note the introductory remark, stating that the resolution was adopted "*after some considerable discussion.*" These Italics are ours.———*Dio Lewis' Monthly*

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is a new and finely issued journal, published in New York, devoted to sanitary and social science. If we are to judge from the first number as to the character of the future issues, we would advise those who hold "social" views similar to our own on the negro question to let it severely alone. But in all of its sanitary suggestions, the "Monthly" is on the right path.———*Doctors not Witnesses.*—According to the July number, 1883, of the *Fort Wayne Journal of the Medical Sciences*, "the Missouri Supreme Court has decided that information obtained by a physician from a patient must not be disclosed on the witness stand," if the information acquired was while acting in a professional capacity and was necessary to enable him to prescribe as a physician, or operate as a surgeon. The court held that it would not do, while the mouth of a physician is closed as to the talk of a patient, to open it as knowledge acquired from his own diagnosis of the case.———*Dr. Theophilus Parvin*, of Indianapolis, has accepted the Chair of Obstetrics and Diseases of Women in the Jefferson Medical College, of Philadelphia. His popularity in the profession is shown by the fact that he is an ex-President of the American Medical Association. His ability is too well recognized throughout the country—especially in this special line of practice, because of which he has been called to the "Old Jeff."—to need remark. His power is nowhere more eminently noted than in the line of teaching. He will be a great man in an important chair. ———*Medical Department of the University of Virginia.*—This time-honored institution of medical education of the South closed its recent session with as brilliant results as ever it did. Young men of ability and learning were graduated with the same care as to the public interests as heretofore, and we are glad to learn that its prospects for the approaching session are encouraging.———*The Tri-State Medical Association* (representing Indiana, Missouri and one of the adjoining States, which is not stated in the notice we are asked to copy), according to a circular letter from the President, Dr. Wm. Porter, of St. Louis, Mo., will meet in ninth annual session in Indianapolis, Ind., Tuesday, September 18th, 1883. "The work is already far advanced, and title of each paper should be sent in at once. Papers must not exceed twenty-five minutes in reading. Each physician who registers must be a member of a local or State Society in good repute. All such are invited. Notice of papers or cases to be presented may be sent to the chairman of the Committee on Pregramme, Dr. J. L. Thompson, Indianapolis, or to the Secro-

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tary, Dr G. W. Burton, Mitchell, Ind., or to the President, Dr. Wm. Porter, of St. Louis."———*Mr. E. Scheffer, Manufacturer of Pepsin*, is one of our advertisers who has never requested or suggested "a notice," although he has been with us almost from the beginning of our journal. His modesty makes him wish his honesty not to be heralded. His preparation stands upon its own merits, and we are glad to learn that his non-pretentious statements of facts are everywhere bearing the severest of criticisms, and yet are always "on top," because of their absolute truthfulness. Some seek to make money or temporary reputation at the sacrifice of honor. In Mr. Scheffer's case we have a good example to follow. He simply announces *what he does* in his advertisement. It is useless to say to any but our youngest readers, that this gentleman, of more than national reputation, has his business office in Louisville, Ky.———*Rex Magnus* is the title of one of our advertisements, which is unfortunate as to the article itself. There is, in reality, nothing quackish about it. The article is intended to preserve different articles of food, etc., without the slightest detriment to their quality. It has the endorsation of no less a chemist than Dr. C. A. Linsley, Dean of the Medical Department of Yale College, and Health Officer of New Haven, Conn., as well as others of eminence in the profession. Any of our subscribers can get a pound package free, *if he will agree to test it*, by addressing the Humiston Food Preserving Company, Boston, Mass. See their advertisement as to naming express office.———*Important Changes in the Strength of Medicines.*—Presuming that all practitioners as well as druggists have the lately-revised U. S. *Pharmacopœia*, let this note serve to warn them to consult the book before prescribing the opium strength of laudanum. Dr. E. R. Squibb, we are informed, has emphatically declined to vary the strength—nominally, if not in reality, antagonizing the expressions of the books. No one more than we, recognize the special excellence of his preparations, according to the statements put upon his labels. But because he has become wealthy, on account of the appreciation which the profession of medicine and the pharmacists of the United States has placed upon his drugs, it looks over-officious in him to confront national opinion, confuse both doctor and druggist, and risk, perhaps, human life by obstinacy. By such a course as he is pursuing in this matter, he will do others injury, and himself no good. He will confuse everybody. If Dr. Squibb is *the* authority, let us authoritatively know it, as a profession; if the United

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Dr. Seguin says that not one in a thousand has been entirely refractory to treatment; not one in a hundred who has not been made more happy and healthy; more than 30 per cent. have been taught to conform to social and moral law, and rendered capable of order, of good feeling, and of working like the third of a man; more than 40 per cent. have been capable of the ordinary transactions of life under friendly control, of understanding moral and social instructions, of working like two-thirds of a man; and 25 to 30 per cent. come nearer and nearer to the standard of manhood, till some of them will defy the scrutiny of good judges when compared with ordinary young women and men.

The greatest difficulty of the teacher is to properly classify his pupils and to form an estimate of their mental powers and guess at what stage to begin, what faculties can be most readily called into cultivation, and what most requires training and exercise. Each of the classes presents its connecting links, in cases which resemble, in their peculiarities, those of the classes above and below.

Genetous Idiocy.—Under this class, the worst cases, as well as those admitting of education, occur. In the most profound cases they are as solitary as when they were born, and quite as helpless. The face is without expression; the saliva often runs from the mouth; the teeth are irregular; the lips are large, and the eyes have a vacant expression. The voice is limited to screaming and howling.

The prognosis is good when the child is active and vigorous, noticing things, where he has begun to speak before six or seven and has got a firm grasp, and the faculty of attention is capable of being sustained. It is a bad sign when the grasp is loose, or readily relaxed, when the eye cannot be fixed, and when there are automatic motions. "The power of muscular motion, as shown in walking over the floor or across a plank, or, in better cases, of carrying a vessel full of water, is a surer test than that of tactile sensibility." The muscular development is usually bad; the coordination of the muscles in their movements is very deficient, and spasmodic movements are usual.

Says Dr. Langdon Down: "We have learned by experience

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this important fact, that the child who has been born with defective intellect is more susceptible of improvement by physical and intellectual training than the child who has been born with full possession of his brain power, and has afterwards been deprived thereof." Dr. C. T. Wilbur, in the Tenth Report of the Institution for Feeble-Minded Children, at Jacksonville, Illinois, says: "Congenital idiocy furnishes the most improvable subjects for the school-room and for training in useful occupations. The majority of them in the degree of mental deficiency stand upon the plane just below the lower grades of ordinary intelligence."

The treatment of genetous idiocy is mainly medical and hygienic. Regular exercises, gymnastics, and judicious diet are necessary. The scrofulous diathesis needs great attention. Every possible attempt should be made to raise the muscular power, and to enable the child to do a few things for himself. Cleanly habits and tidiness of person should be inculcated.

The following case of genetous idiocy came under our care and treatment:—Emily S. was nine years of age when she came under observation. She seemed more fully developed than the majority of idiots. The cranium was symmetrical. The contour of the face was regular and pleasing, with the exception of a large mouth. The eyes were dull and constantly roving about, and it was impossible to fix her attention. She had but little control over her muscles, no matter in what position she was placed. If placed in a standing position she would remain for a long time, and if gently pushed she would move along by sliding her feet on the floor. She has no mind to use her senses any more than an infant. If food was placed in her mouth she would swallow it, but seemed to have no sense of taste. The digestive organs were in a very poor condition. She suffered alternately with diarrhœa and constipation. If any object was placed in her hand she would drop it. Through some defect in the nerves communicating between the ear and the brain, ordinary sounds failed to disturb her, although a loud noise, made unexpectedly close to her ear, would cause her to move her head. But she had never learned to interpret the sounds of the human voice into a living language. If she was pricked with a pin on her hands or feet, she would scream, but would not move them. She very rarely shed

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tears. She was unable to speak, but when angry she would utter piercing screams. Her instincts and intelligence were far below those of an animal. She seemed to lead a purely vegetable life.

This surely was not a very inviting case, but it was one of those cases in which it was necessary to reach and develop the mind through the medium of the senses. In all imbeciles there is a striking want of co-ordination in the muscular system, and our first effort was to overcome this mutiny of the muscles, and by a process of development we hoped to improve the nutrition of the central nervous ganglia themselves.

Emily was first placed with her back to the wall, and her knees so that she could not bend them; then her feet were gradually drawn forward until her position became uncomfortable, when she was restored to a more comfortable position by pulling them back. This was tried again and again, until she finally, to relieve herself, began to draw back first one foot and then both feet. The next exercise was to have her walk on a spring-board until she learned to a certain extent to raise her feet, and then on some blocks elevated a few inches from the floor. It took her many days to learn to step from one block to another, at first with assistance and then alone. On the floor she would have slid her feet, but here she was obliged to step or else fall. She was then required to walk several feet on a narrow plank with head erect. These exercises occupied several weeks, but a great deal was accomplished.

Emily had acquired confidence in herself, but still it was necessary to compel her to walk, as she would not do it of her own impulse. The next exercise was to put her hand under control of the will. Emily's hands were small, and, what is not often the case with idiots, soft and plump. The fingers were unable to grasp anything, and she could not employ her hands in any useful manner. All movements seemed to be from the wrist. A systematic course of exercises was commenced to educate the hand, and through the sense of feeling the brain. As Emily could not grasp anything, a ball was placed in her hand and they were both enclosed in the teacher's hand. It was a long time before she would hold the ball until commanded to drop it. She was also exercised in catching a small bag of beans which were thrown a short distance. She was then put in front of an

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inclined ladder, her feet on a round, her hands on another; but it took weeks of practice before she would hold on without assistance. In the meantime, she was made to observe what was round, smooth, angular, sharp, and so on—that a ball would roll, and that a smooth object would slide. The function of motion demands a distinct volition, while the sense of touch is automatic; this is the reason why a defective grasp is more common with idiots than a defective sense of touch. Emily could grasp the hand long before she could hold a pencil. It was necessary that there should be a co-operation of the sense of touch and that of vision, in order that the pupil might see what she wished to handle, and that the hand might become the conscious assistant of the eye. Emily was taught to watch the hands of her teacher and her own hands. A number of brightly colored sticks were placed before her, and she was required by a great deal of patient teaching, to take up one stick at a time of the same color as the one used by the teacher, and put it into a position similar to his.

But the most difficult matter was to teach her to speak. Some idiots who are very deficient in mind, can often speak and sing, while others with considerable powers of attention and mental perception are unable to use their voice. The greater number of those who remain mute do not speak simply because they have no ideas to express. As their mental faculties improve words come; therefore it is necessary to cultivate their perceptive faculties.

Thus far all of Emily's instruction had been by imitation; no words had been used. These oft-repeated experiments had slowly improved the sense of sight, quickened the movements, extended the range of perceptions, given accuracy to the understanding, and put parts of the body under the control of the will. It was a long time before she could be prevailed upon to say pa and ma. After she had acquired the capacity of imitating a few words it did not take long for her to pronounce the vowels; but the most persistent training failed to get her to use words unless by imitation. In four months' practice she could speak some twenty words distinctly. She has considerable control of her face, and when ordered can bring her lips together. The walk is easy, without any swinging or shambling. When commanded she would raise her hands and pick up objects from the table when told to, but the most marked improvement was her ability to string buttons on a brass wire, first a large button and then a small one, and so on, and also to place

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blocks one on the top of another until four or five rows had been made.

In various ways she showed that her reflective faculties had been considerably developed, and she has more the appearance of a backward child than of an idiot.

During Emily's treatment great attention was given to her diet, as it was made to consist of a fair proportion of nitrogenous elements, and also rich in phosphatic and oleaginous constituents.

Microcephalic Idiocy.—Experience has proved that these cases improve under training, and have more physical and moral energy than is common with idiots of other classes. A child is mentioned by Dr. Ireland the circumference of whose head was 14⅛ inches; from root of nose to spine of occiput, 7⅞ inches. The child, aged eight years, was healthy and well made, but little for his age; teeth good; hands and feet small. "He was very quarrelsome and unmanageable, biting and kicking when angry. If his nurse pretended to cry when he struck her, he would appear sorry. She thought him the most intelligent child among eight idiots of about his own age. If the other children struck him, he would fly at them. He was imitative, but inclined to steal. When caught stealing he seemed ashamed and turned red." At eleven years of age he was well conducted and fairly sociable. Though unable to articulate clearly, more than a few monosyllabic words, such as "look," "come," "see," etc. (which he uses appropriately), he has evidently a fair degree of understanding. At school he tries to imitate writing on a slate, to match colors, and to join in the drilling exercises of the children.

Eclampsic Idiocy.—The prognosis in these cases is unfavorable. Although the power of muscular motion, as well as tactile sensibility is well preserved, the intelligence is in a great degree destroyed, and the child is capable of very little education. He can be taught more readily to work than to think. Says Dr. Ireland: "Of the thirteen cases carefully studied, six could be taught to work a little with their hands; in other things they were of comparatively inferior intelligence. In two the grasp was deficient. In one of these cases the pupil was prevented by imperfect power and

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insensibility in the hands from learning to work properly, though she was willing and docile, could learn to read a little, and possessed, comparatively speaking, a considerable amount of intelligence. Eight of our eclampsic cases were mutes, or nearly so, and three articulated imperfectly; thus only two could speak correctly. But of these two, one was a very educable case, a girl who was believed to have been born at the full time, and with neither difficulty nor accident. The fits occurred when she was six weeks old, and were accompanied with febrile action. Her life was despaired of, but the fits passed away entirely, and did not return with dentition. She was a weakly and delicate child, but is now healthy, strong, and active. She entered the institution at fourteen years of age, and was five years with us. She made slow progress in learning to read, but great progress in learning to work. She could fill brushes quicker than any of the pupils, and was good at sewing, knitting, and household work. There was also great improvement in general intelligence."

Epileptic Idiocy.—Many children grow up suffering more or less from epilepsy, and reach a good age, having had no mental defect. When epilepsy is associated with idiocy, we are led to think that a lesion has been produced in the brain and spinal cord not likely ever to be effaced.

The mischief, dirt, obstinacy, and vicious propensities of many epileptic imbeciles, render them a cause of great anxiety. "Though they generally possess an amount of intelligence apt to deceive those who do not take into consideration the existence of a disease which may be expected again and again to return, they are not easily taught, and are liable to lose what they have learned."

Owing to the great amout of care and attention required, epileptic idiots are excluded from the gratuitous benefits of all training schools. There is no doubt, however, but that under appropriate medical treatment, a certain amount of good can be accomplished. The diminution of the numbers of the attacks, the increase of the general health, and the secondary cultivation of the mind, are the objects to be had in view.

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The following case is given by Duncan and Millard: "A girl, aged ten years; has a well-formed head and a pleasing, simpering and meek-looking face. The head is generally held on one side. The special senses are as they should be, but speech barely exists. The body and limbs are tolerably well made. Her walk is very tottering, and the muscular power is weak. She cannot cut her food nor dress herself, and she is not very clean. Her mental powers are all very defective, slow and weak. She knows when she has done wrong; is affectionate, but very obstinate. She can neither read nor write. She pays a little attention; has no judgment or common sense, but is very careful to get out of the way of mischief. She has a good deal of passive will. She is very excitable; likes company and new things. She has slight epilepsy several times during the day. After five years the fits had almost ceased, and she improved in mind."

Hydrocephalic Idiocy.—These cases usually improve under training. Their temper is often peculiar, and they become excitable without any reasonable cause. All may be taught to be cleanly, kind, affectionate and obedient, and many may be taught to work, to sew and to read.

Dr. Ireland mentions the following case:—"B. S. was fifteen years when admitted to the institution. He was the second child of eight. His father's brother died of phthisis. In his case the hydrocephalus had been complicated by fits, which lasted for six years. They ceased when he was seven years old, and he had none during the five years he was with us. The head was hydrocephalic, both in size and shape. The teeth were not very good, and the palate somewhat high, like that of a young child, but not vaulted. The touch and grasp were believed to be deficient. He was willing to oblige and do services, and his temper was generally placid and gentle, but he was furious when irritated. * * * * He learned to add together figures not above six, but got confused when the sum amounted above thirty. He improved in general intelligence and the use of his hands. He was taught to read words of two syllables and to spell a few of them. He could not learn to write."

Paralytic Idiocy.—These cases seem to improve mentally rather than physically, although something can be done to improve the more or less paralyzed limbs. Of six cases of paralytic idiocy coming under Dr. Ireland's notice, one, a girl, aged nine, was improving mentally, the paralysis, which

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was caused by a fall when three years old, remaining the same. The second, a girl, aged seven, had fits as well as paralysis (hemiplegia), which was getting rather worse, while the mind became brighter. The third was a boy, aged nine, the palsy dating from the second year. Right arm and leg affected, both as regards motion and sensibility; nearly blind at the same time, but slightly afterwards improved; disposition tractable. The fourth case, aged eight, was, on admission, deaf and partially paraplegic; walk difficult; improved in general intelligence; learned to copy striking peculiarities in other people's handwriting, and to sew and knit; died of anasarca, the sequel of scarlet fever. The fifth case, a boy, aged nine; very feeble; was stated to have been twice severely ill from threatened hydrocephalus, and to have had one side weak; died of gastric fever; no progress observed during four months he was in the house. The sixth case, a boy, aged eleven; hemiplegia from eighth month; sensation, as well as motion, diminished; articulation deficient; grasp of left hand slowly returning; learning to read and write; extremely willing to learn; progress very gratifying.

Cretinism.—The Sardinian Commission divided cretinism into three classes, according to the measure of their mental powers. In the first class the subjects have only vegetative faculties; are entirely destitute of reproductive and intellectual powers, and cannot speak. These are styled simply *cretins*. In the second class they have vegetative and reproductive faculties and some rudiments of language. Their intellectual efforts go no further than their bodily wants, corresponding only to the impressions of the senses. These are called *semi-cretins*. The third class adds to the faculty of the preceding one, a greater amount of intellectual power, without reaching the normal human capacity. They have some aptitude at learning a trade or doing different kinds of work. They are called *cretineaux*, or *cretinous*. They improve under training about the same as idiots of other classes.

Traumatic Idiocy.—In some cases, the injury to the mental power is permanent; in others, it disappears more or less

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slowly. They are usually either simple-minded or imbecile, rather than belonging to the lower grades of idiocy.

The following case is given:—"K. V., aged thirteen; head small, narrowing towards vertex. He was the first child; mother sixteen years old at his birth; born at full time, and delivered with forceps. The marks of forceps were still visible on the right temple, where there was a spot destitute of hair. The infant could not suck for the first week. He had three fits a short time after birth, and a great many more when three months old. He had no fits for three years. He began to walk at three years; can only speak a few words, but understands to a limited extent what is said to him; knows he can get something for money; use of hands deficient; good natured; apparently healthly.

The mother, a healthy-looking Irish woman, had five other children; all delivered by the forceps. They are all healthy, and said to be of average intelligence.

Inflammatory Idiocy.—Dr. Ireland says: "The amount of damage to the intellectual powers must be mainly dependent upon the intensity of the morbid process, which we have seldom a direct opportunity of measuring."

The following case came under the observation of Dr. Auguste Voisin:—A girl who, it appears, had no hereditary predisposition to nervous affections, and whose intelligence had gone on increasing in a normal manner up to seven years of age, was seized with a very severe typhoid fever, accompanied by intense cerebral complications. From this time her intelligence was arrested in its development. She derived very little benefit from the education which was given her. Nevertheless, she was married; but she was incapable of managing her house and of doing her domestic duties. In the course of time her imbecility became complicated with sensorial and intellectual delirium, and at the age of thirty years she was sent to the Salpêtrière, where she died through an accidental cause.

Idiocy by Deprivation; i. e., by being deprived of two or more of the principal senses.—When idiots are deaf or blind, it is a very serious bar to their instruction. In a child of ordinary capacity, deafness is a much greater obstacle to instruction than blindness, but in idiots this is not the case, whose knowledge of the outward world is gained from observing its superficial phenomena. One of the most interesting cases of this form of idiocy, is that of Laura Bridgman, given by

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Dr. Howe in the Third Annual Report of the Perkins Institution and Massachusetts Asylum for the Blind:

"I found in a little village in the mountains a pretty and lively girl about six years old, who was totally blind and deaf, and who had only a very indistinct sense of smell; so indistinct that, unlike other young deaf mutes, who are continually smelling at things, she did not smell even at her food. This sense afterwards developed itself a little, but was never much used or relied upon by her. She lost her senses by scarlet fever so early, that she had no recollection of any exercise of them."

Dr. Howe then tells how he took her into his house at Boston and set about trying to educate her:—"I required her, by signs, which she soon came to understand, to devote several hours a day to learning to use her hands, and to acquiring command of her muscles and limbs. But my principal aim and hope was to enable her to recognize the twenty-six signs which represent the letters of the alphabet. She submitted to the process patiently, though without understanding its purpose. I will here give a rough sketch of the means which I contrived for her mental development. I first selected short monosyllables, so that the sign which she was to learn might be as simple as possible. I placed before her, on the table, a pen and a pin; and then, making her take notice of the fingers of one of my hands, I placed them in the three positions used as signs of the manual alphabet of deaf mutes for the letters p e n, and made her feel of them, over and over again, many times, so that they might be associated together in her mind. I did the same with the pin, and repeated it scores of times. She at last perceived that the signs were complex, and that the middle sign of the one, that is, the *e*, differed from the middle sign of the other, that is *i*. This was the first step gained. This process was repeated over and over hundreds of times, until, finally, the association was established in her mind between the sign composed of three signs, and expressed by three positions of my fingers, and the article itself, so that when I held up the pen to her she would herself make the complex sign; and when I made the complex sign on my fingers, she would triumphantly pick up the pen and hold it up before me, as much as to say, 'This is what you want.'

"Then the same process was gone over with the pin, until the association in her mind was intimate and complete between the two articles and the complex positions of the fingers. She had thus learned two arbitrary signs, or the

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names of the two different things. She seemed conscious of having understood and done what I wanted, for she smiled, while I exclaimed inwardly and triumphantly, '*εὑρῆκα! εὑρῆκα!*' I now felt that the first step had been taken successfully, and that this was the only really difficult one, because, by continuing the same process by which she had become enabled to distinguish two articles by two arbitrary signs, she could go on and learn to express in signs two thousand, and finally the forty and odd thousand signs or words in the English language.

"Having learned that the sign for these two articles—pin and pen—was composed of three signs, she would perceive that, in order to learn the names for other things, she had yet to learn other signs. I went on with monosyllables, as being the simplest; and she learned gradually one sign of a letter from another until she knew all the arbitrary tangible twenty-six letters of the alphabet, and how to arrange them to express various objects—knife, fork, spoon, thread and the like. Afterwards she learned the names of the ten numerals or digits, of the punctuation and exclamation and interrogation points—some forty-six in all. With these she could express the name of everything, of every thought, of every feeling, and all the numberless shades thereof. She had thus got the 'open resumé' to the whole treasury of the English language. She seemed aware of the importance of the process, and worked at it eagerly and incessantly, taking up various articles and inquiring by gestures and looks what signs upon her fingers were to be put together in order to express their names. At times she was too radiant with delight to be able to conceal her emotions.

"After she had mastered the system of arbitrary signs made by the various positions of the fingers used by deaf mutes, and called dactylology, the next process was to teach her to recognize the same signs in types with the outlines of the letters embossed upon their ends. Thus with types, two embossed with p, two with n, one with e, and another with i, she could, by setting them side by side in the quadrilateral holes in the blind man's slate, make the sign of pen or pin, as she wished; and so with other signs. The next process was to teach her that when a certain kind of paper was pressed firmly upon the ends of these types, held close together and side by side, there would be a tangible sign on the reverse of the paper, as pin or pen, according to the position of the three types; that she could feel of this paper, distinguish the letters, and so read, and that these signs

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could be varied and multiplied, and put together in order, and so make a book.

"Then she was provided with types having the outlines of the letters made with projecting pin points, which, when pressed upon stiffened paper, pierced through, and left a dotted outline of each letter upon the reverse side. This, she soon ascertained, could serve for writing down whatever she desired, and be read by herself; and also could be addressed to friends, and sent to them by mail.

"She was also taught to write letters and words with a lead pencil, by the aid of the French writing-board, which is the most simple, most effective and cheapest method ever yet invented."

Dr. Howe found great difficulty in teaching abstract relations and qualities to his interesting pupil, ere it was thus overcome:

"She knew that some girls and women of her acquaintance were very sweet and amiable in their tempers, because they treated her so kindly and caressed her so constantly. She knew, also, that others were quite different in their deportment, that they avoided or repelled her, and were abrupt in their motions and gestures while in contact with her, and might be called therefore sour in their tempers. By a little skill she was made to associate, in her mind, the first person with a sweet apple, the other with a sour apple; and so there was a sign for a moral quality. This is a rough illustration; but it is hard to explain the process by which any children come to understand the names of things in the abstract or moral qualities.

"And so she went on, diligently and happily, for a score or more of years, until at last she acquired a large vocabulary of words, and could converse readily and rapidly with all deaf-mutes and all persons who could use these signs. She could read printed books readily and easily, finding out for herself, for instance, any chapter and verse of Scripture. She could also read letters from her friends in pricked type, as by the Braille system of points. She could also write down her own thoughts and experiences in a diary, and could keep up a correspondence with her family and friends by sending to them letters in pencil, and receiving their answers either in pricked letters, which she could read by the touch; or letters written with ink or pencil, which could be read to her by some confidential seeing person."

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ART. II.—**Urinary Analysis; A Neglected Means of Diagnosis.**
By WM. G. EGGLESTON, M. D., Lately of Hampden Sidney College, Va.; now Assistant Editor *Medical News*, Philadelphia, Pa., etc.

Considering the length of time urinary analysis has been regarded as a valuable means of diagnosis by the leading men of our profession, and the amount of chemical and microscopical light that has been thrown on this subject in the last ten years, it is a matter of no little surprise that it is still so much neglected—especially by the country practitioner. By many, it seems to be regarded as a subject apart from medicine, in which only chemists and microscopists can dabble. By others, such analysis is regarded as a valuable help to medicine in many cases, but a branch in which it is scarcely worth the time and trouble necessary to perfect ones self; by a few, who are objects of our professional pity, and who may consider it as dangerous to patients, as a humbug. With all these, the chief fault lies in a lamentable ignorance of the physiology of the urine.

This fault—a criminal fault it is—is not to be laid entirely at the door of the student or practitioner. The faculties of our medical colleges must share a large part of the responsibility and blame attached to this ignorance, because such courses as "Physical Diagnosis" and "Urinary Analysis" are not made compulsory for graduation; and medical students, like all others, often study more for the diploma than for the information which they can acquire. Hence we see scores of practitioners, with diplomas from our leading colleges, well up on the tongue, the pulse, the countenance, etc., who are as utterly and entirely ignorant of all information to be derived from the urine, as they are of the inscriptions on a Ninevah brick.

The kidney is the only organ in the human body whose sole function is *excretion*. This fact alone should make it highly interesting; but when to this is added the fact that it participates, and sounds a note of warning in almost all the diseases which attack the human frame, we at once see that it becomes a subject of the utmost importance.

In studying the urine, we are at once brought face to face

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with the fact that it is an *acid* liquid secreted from an *alkaline* blood-serum. This has not yet been satisfactorily explained; but a probable explanation may lie in the facts deduced by Maly, Donath, and Posch*—that by the agency of osmosis, an acid fluid may be obtained from a watery solution of several salts (as mono- and di-sodic phosphates), which together give a neutral or slightly alkaline re-action with litmus paper.

The urine is the only animal fluid representing only the products of waste or retrograde tissue-metamorphosis. It contains substances not introduced with the food, but which are being constantly formed by a continuous metamorphosis or chemical action going on in the animal frame. We say tissue-metamorphosis because these new substances represent those ingredients of the animal tissues which have done their work and are no longer necessary, and are therefore known as *excrementitious* substances. It is necessary that they be quickly carried out of the system after having performed their work, as their accumulation produces a poisonous influence on the animal economy. These excrementitious substances are closely analogous in their chemical composition, and almost without exception contain nitrogen as one of their elements. They are crystallizable, and generally soluble in water. Nature has provided that the water of the urine is ordinarily more than sufficient to hold the solid matters in solution, so that they may be diminished temporarily without causing any deposit.

It is unnecessary to speak of the anatomy of the kidneys, or of the normal ingredients of the urine separately, as these matters are fully explained in the text-books.

In diseased conditions, certain abnormal ingredients appear in the urine, such as—"1st. Foreign substances accidentally present in the blood, which are eliminated by the kidneys, such as *glucose, biliary matters*, and *medicinal substances;* or 2nd. The albuminous constituents of the blood, which are discharged with the urine, owing to a disturbance of the renal circulation" (Dalton). Under the first, we mention *glucose and biliary matters*, beside the various medicinal substances

* *Analysis of the Urine—Hoffmann & Ultzmann.*

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which appear in the urine after administration. Brück declares that sugar is a constant ingredient of normal urine but it is present in such small quantities that it cannot b detected by the ordinary tests for sugar. When readily de tected in urine, the specific gravity of which is from 1030-1050, the patient is suffering with diabetes. "This sugar i not formed in the kidneys, but preëxists in the blood, from which it is eliminated in the renal circulation" (Dalton.)

Leucine and tyrosine, decomposition products of the albu minous and albuminoid bodies, are found in the urine in acute yellow atrophy of the liver, and sometimes in cases o phosphorous poisoning.

Biliary coloring matters are found in the urine in most diseases of the liver, and "icterus can be prognosed one or more days in advance by the appearance in the urine." *

Plant-coloring matters and *urcythene* are sometimes found in the urine, but it is unnecessary to discuss these.

Albumen never exists in normal urine.† Consequently, when it is present we know that there is either—(1.) Some disease causing alteration of the so-called *diffusion membrane* of the kidney, or the epithelium of the tubules and the adjacent small arteries. (2.) Abnormally increased blood-pressure in the glomeruli of the kidneys. (3.) Blood, pus, or some albuminous fluid in the urine. (4.) Hydræmia. The probable explanation of the absence of albumen in normal urine is to be found in Ludwig's mechanical theory of the urine secretion. He assumes that the secretion in the tubules is a diffusion process, and in the glomeruli, a transudation process. The blood in the kidney is separated from the urine by an animal membrane, which readily permits the passage of the crystalline substances, but which under a normal blood-pressure, keeps back such substances as albumen (the colloids, etc).

In studying the physiology of the urine it is also necessary to be familiar with the deposits, which consist either of normal ingredients or organized products generally from the

* Hoffmann & Ultzmann.

† We do not refer to *egg-albumen*, which often appears after an abundant use of the same.

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mucous membrane of the urinary tract. The most difficult feature connected with urinary analysis is the physiology of the urine, but no more so than that of the stomach or liver, although equally important; indeed Dalton places the renal function as second in importance only to that of respiration.

Information derived from urinary analysis is a physical sign, and hence more important as a means of diagnosis than any rational symptom occurring in the same disease. When called upon to treat a case of suspected cardiac disease, we are not in a condition to treat that patient until we have discovered the nature of the lesion, and the progress that it has made—in a word, till we can say with certainty what anatomical changes would be found if the patient should die at that time. The tongue will not give us this information; neither will the pulse, nor the temperature. It is necessary that a thorough *physical examination* be made, and the physical signs of that particular disease of the heart be elicited. We resort to inspection, palpation, percussion, and auscultation, and the following facts brought out: whether the heart itself is affected; whether the apex beat is in its normal position; whether there is any upheaval of the chest, if enlarged, what part and to what extent; whether the disease is functional or organic—if there are abnormal sounds, and at what point or points located? Or to take a more complicated case: A patient has dropsy—a convenient term covering a multitude of evils. A practitioner who prescribes for *dropsy*—and the name of those who do so is legion—takes a leap in the dark, which may kill his patient and damage his own reputation. He ought to know that dropsy may be—generally is—due to cardiac, renal or hepatic disease, or a combination of them. If he prescribes a course of diuretics and there is serious kidney lesion, so much the worse for the patient. The particular organ affected must be known before he can prescribe for the patient, for treatment and prognosis both depend, to a great extent, on this knowledge.

In a similar manner must we proceed in examining the urine. It must be inspected, its color noted, its quantity in twenty-four hours, specific gravity, and the sediment col-

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lected for microscopic examination. In a case of suspected diabetes it should always be *tasted*. It is astonishing how much information can be derived from these simple procedures. They tell us in a great measure what to look for; in many cases we are not likely to find a thing unless we look for it. This preliminary examination often narrows the possible diagnosis by exclusion. A distinguished English writer says that the method of diagnosis is a very lame one. The fact is, nine-tenths of our important diagnoses are made in this very manner, and we diagnose a particular disease, say of the lungs, simply because the signs are such that we know it can't be any other. If we know that an abnormally large * amount of urine is passed in twenty-four hours, with an acid reaction and a specific gravity of 1030–1050, it is wasting time to look for albumen and casts; we save time, and test for sugar. A preliminary examination has told us what to look for. The rational symptoms of diabetes, or most renal, hepatic or cardiac diseases are evident enough when they come on. But treatment should have commenced before they are very apparent, otherwise we have "lost a day."

Urinary analysis is a means, therefore, of early diagnosis, enables us in many cases to head off the disease, and giving us at once a clue to the proper treatment. Many a gouty headache has terminated in a swollen foot because the urine was not examined and the tell-tale urate of soda discovered in time for early administration of colchicum, salycilic acid, etc.; equally many cases of uric-acid diathesis have gone on writhing in the agonies of nephritic colic, because the urine has been neglected, and alkalies withheld. We are all aware of the close similarity between some cases of typhoid fever and tubercular meningitis, and *vice versa;* the urine shows that, in typhoid, albumen and indican are eliminated by the kidneys; in meningitis urohematin, but no albumen or indican.† Duchek‡ has pointed out the fact that in scorbutus the urine early becomes dark-colored with an increased

* Toward the end of a case of diabetes there may be a marked decline in the amount of urine passed.

† Lambert, Ott.—*Phil. Med. Times.*

‡ *Wien. Med. Wochenschr.*

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amount of urea. In cases where albumen is found in the urine, we should not be too swift to diagnose Bright's disease; even when pregnancy does not exist, it may be due, as Mr. Carter has shown * to disorder of the nervous system from prolonged anxiety, or to some disorder of the sexual functions, or the digestive tract may be at fault, giving rise to "food albuminuria;" or in still other cases the blood may be at fault from some change in the liquid itself or some mechanical impediment has retarded the flow. We know, however, that, as a rule, albuminuria with *high* arterial tension indicates the commencement of Bright's disease. The importance of early diagnosis cannot be overestimated. It is much easier to treat a case of diabetes insipidus, than of diabetes mellitus. Expectant *treatment* is often the best, but expectant diagnosis will always bring us to grief.

There is nothing especially difficult in a qualitative analysis of the urine, and in most cases this is all that is required. Two hours are sufficient for an elaborate qualitative analysis, which would save many hours of suffering to a patient, perhaps his life, and much anxiety to the careful and conscientious practitioner; possibly, also, much time spent in fruitless consultations. If we find that a sample of urine contains a large amount of sugar, with high specific gravity, we need not trouble ourselves to record the exact number of grains per pint in order to establish a diagnosis. Many men who can make a qualitative analysis easily, would take a month for one quantitative. The latter is only necessary in about 50 per cent. of all cases, at the most. In 87 analyses made in thirteen months, the writer has only had occasion to make *two* quantitative. It is easy to ascertain the amount of urine passed in twenty-four hours—easy to place a urinometer in it and determine the specific gravity—just as easy to dip a piece of litmus paper in it and see the reaction. A few minutes' boiling in a test-tube will show the presence or absence of albumen; the addition of caustic potash and acetic acid to this, will show whether a cloudiness indicates albumen or earthy phosphates, and also if sugar is present, and

* *Lancet*, May 13, 1882.

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so on, one step leading to another. Not only do the diagnosis and treatment depend largely upon these simple procedures, but the prognosis also. In all inflammatory and febrile states, there is a decrease in the amount of chlorides passed by the kidneys; and when these begin to increase, the prognosis becomes more favorable.

The Microscope is a most valuable aid in examining the urine. With it we determine the nature of the crystals and sediment, and from what portion of the urinary tract the particles of epithelium come. Nature seems to have intentionally made a wide difference between the crystals in different samples of urine, and in the epithelium of different portions of the urinary passages. Epithelium from the straight tubes of the kidneys, from the pelvis and ureters, from the bladder, the prostate, Cowper's glands, from the male urethra, female urethra, vaginal epithelium and epithelium from Littré's glands, are all different. This is an invaluable aid to us in diagnosing the particular part of the urinary tract diseased. The various crystals of uric acid, nitrate of urea, oxalate of lime, triple phosphates, urate of ammonia, etc., are scarcely less different than the epithelial scales. The casts, too, differ. To quote from a distinguished English writer:* "In order to understand the significance of tube-casts, you have to bear in mind the structure of the kidney. The basis of all tube-casts is an albumino-fibrous material derived from the blood, which, when it exists alone, forms a transparent, structureless, so-called 'hyaline cast.' 'Hyaline casts' may be 'small' or 'large,' the latter about twice the diameter of the former, and having a more sharply defined outline. What is the explanation of this difference of diameter? Not, as is sometimes carelessly asserted, the difference in the size of the tubes in which they have been moulded. The vast majority of the casts, both large and small, have been formed within the convoluted secreting tubes of the cortex, which are remarkable for their uniform size. The different diameter of the casts is explained by the fact that the small casts have been moulded within the

*George Johnson, M. D., *Brit. Med. Jour.*, March, 1882.

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lumen—the clear central canal—of convoluted tubes which retain their lining of glandular epithelium; while, on the other hand, the 'large hyaline cast' has been formed within the basement membrane of a tube the epithelial lining of which has been destroyed and displaced by the hyaline material of the cast. The large casts, therefore, point to a greater structural change * * * than the small casts."

As before stated, these casts show marked differences under the microscope. There are *exudative* casts, most frequently seen in the first stage of the inflammatory form of Bright's disease; *epithelial* casts, or *desquamative* casts—detached portions of the lining membrane of the tubules—are seen in the acute stage of desquamative nephritis—*fatty* casts or *oil* casts, which, after a larger number of cells have degenerated, give place to the *granular* casts seen in the chronic stages of desquamative nephritis. The two latter indicate the large white, granular, or fatty kidney. The *white-cell* casts—due probably to a migration of leucocytes through the walls of the Malpighian capillaries—are diagnostic of what was described by Klebs as "glomerulo-nephritis." *Granular* casts containing epithelial cells from the uriniferous tubules is indicative, as a rule, of the small, red kidney—or gouty kidney—described as the *cirrhotic* or gouty form of Bright's. What are known as *uric-acid* cylinders occur in children suffering with renal infarction. In interstitial suppuration, nephritis cylinders or casts of bacteria and micrococci occur in cases where there are bacterian emboli of the urinary tubules* (*nephritis parasitica* of Klebs.) Besides the foregoing, the miscroscope also enables us to discover the various parasitical growths existing in the urine—as bacteria, yeast fungi, sarcinæ, oïdium lactis, penicillium glaucum; as well as spermatozoa, cancer elements, pus, and entozoa.

A well-known writer says: "The valuable assistance derived by the aid of the microscope in diseases of the kidneys and bladder, is very great. I consider it indispenable in the successful treatment of those diseases. For instance, chronic Bright's disease can be distinguished from an acute case.

*Hoffman and Ultzmann.

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If we find renal casts and blood in the urine of a patient, it indicates disease of a recent date; but if we find transparent or waxy casts, it indicates fatty degeneration of the kidneys. If blood is from the kidneys, the corpuscles are equally diffused through the urine; but if from the bladder or urethra, the color is 'pinkish or vermillion," and contains clots. If we detect uric-acid crystals in the urine before it gets cold, or within six hours after it has been voided, the patient is in danger of having a calculus form in the bladder. This can be ascertained by the aid of the microscope, and then we can give remedies that will avert it. By the aid of the microscope we can detect a malignant from a benign tumor, and pus from a strumous patient from that of a healthy subject."*

ART. III.—**Paresis of the Sphincter of the Bladder. A Clinical Lecture. (Delivered at the University Hospital.)** By J. EDWIN MICHAEL, M. D., Professor of Anatomy and Clinical Surgery in the University of Maryland, Baltimore.

Gentlemen,—The patient to whose case I invite your attention to-day, comes to us with a history which may be explained in several different ways, and I bring him before you in order that we may examine him together, and, if possible, diagnosticate his trouble.

He is a barber by trade, an Englishman by birth, 24 years of age, and has been in the hands of a number of practitioners, none of whom have given him that relief which he sought. The account which he gives of himself is as follows: He was married about two years ago, and two months afterwards had trouble with his bladder. There was frequency of urination and pain during the act. Later there was retention, which was relieved by a physician who introduced an instrument and drew off the water, together with a considerable amount of blood. From that time to the present he has been the victim of incontinence of urine. He denies all previous disease of the genito-urinary tract, venereal or otherwise. His incontinence is of the nature of nearly constant dribbling, and as we see from the state of his clothing and the wet, macerated look of the skin in the

*W. S. Ross in *The Microscope Quarterly Epitome*, September, 1882.

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neighborhood of the penis, it keeps him in an exceedingly uncomfortable condition. This continues also during the night, and his bed is constantly wet. His account of the beginning of the trouble is not sufficiently clear to enable us to make a retrospective diagnosis, or even to decide whether his present complaint is a result of his then pathological condition or of the two vigorous surgery of his medical attendant. We have, in fact, little to guide us, save his present condition, and we must look into that with some care.

Now although his dribbling is constant, it does not serve to keep the bladder empty, for he has occasional calls to urinate, and at such times passes water without straining, and in a full stream, according to his own account. The first explanation which arises in the mind of an experienced surgeon in the presence of a complaint of incontinence, is its opposite—retention. For by far the largest number of cases of incontinence we meet with are due to overflow, the bladder being full and the patient, by reason of stricture or enlarged prostate, not being able to empty it. This man probably has no prostatic hypertrophy, since he is only twenty-four years of age, but he may have stricture, notwithstanding his denial of gonorrhœa. Let us see. You see this sound, No. 12, passes freely into his bladder, and no grasp is felt on its withdrawal. Moreover, there is no dullness in the hypogastric region, as there would be with a full bladder. Now let us see what result will be reached with the catheter. This soft instrument is known as a Nelaton catheter, and although it is so soft and flexible, it can often be made to find a passage where other instruments fail. I use it here, not because the passage is difficult, but because it is a very comfortable instrument for the patient. Observe how smoothly it glides into the bladder. Now what have we learned by the use of the catheter? Two very valuable points: First, That the bladder contained only a few ounces of urine, and that of about normal appearance; Second, That with no voluntary effort on the part of the patient, the urine is projected with considerable vigor through the instrument, showing that the bladder walls are contracted. Next we think of the possibility of stone in the bladder, for although the symptoms are not those which usually accompany that malady, it is possible that may be the trouble, so we will sound him. But we have drawn off the urine, and in order to sound for stone there should be fluid in the bladder. That we can easily remedy by injecting warm water through the catheter, which has been left in *situ* for that

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purpose, and for fear that there may be some stray micrococci in the water, which could set up a cystitis, we will dissolve some borax in it. We will inject six or eight ounces, which will distend the organ sufficiently for our purpose, but not enough to hurt the patient, and remembering that this bladder does not hold water well, we hold the penis firmly while we introduce the sound. Now I examine the fioor of the bladder, now the sides, and depressing the bladder feel behind the pelvis. I find no roughness, no irregularity, and hence conclude that if he had a stone, I have not been able to find it.

Now our examination is complete; let us consider what we have gained by it. We have a patient who, without known cause, has had incomplete incontinence of urine during twenty months, with denial of venereal disease. We have excluded stricture, enlarged prostate, stone and paralysis of the bladder walls. We have now, it seems to me, no other alternative but to conclude that the patient is suffering from incomplete paralysis of the sphincter of the bladder. A well behaved bladder does two things: It retains urine by tonic action of the sphincter, and expels it at proper times by the muscular action of its walls. We have shown equally that this bladder expels but can only partially retain. Hence our conclusion.

This condition must be exceedingly rare, for in a hospital practice of nine years, and student residence of two years, part of it in large European hospitals, this is the first case I have seen. I have not had any opportunity to look carefully into the literature of the subject; but I am pretty well convinced that little, if any mention is made of it, at any rate, in our ordinary text-books. What the cause is in the case before us is beyond my ken. Paralysis of the bladder-walls and of the whole organ sometimes occurs, though rarely alone—there generally being paralysis of other parts, or at least some local cause, as long continued, habitual over-distention from enlarged prostate or stricture; but I have never before seen a case where the affection was confined to the sphincter. There seems to be nothing else whatever wrong with our patient. It is true he is thin, weak-looking and pale, but all his functions are well performed, and he tells me he has always been lean. Moreover, I should consider twenty months of dribbling urine, urinous odor and wet

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bed clothes, a sufficient explanation for a wretched and care-worn expression.

Now we must enter upon the question of treatment with a good deal of circumspection, as we have had no experience whatever in similar cases. Everything must be done on *a priori* reasoning. I shall begin as I would with a similar paresis elsewhere and prescribe:—

℞. Quiniæ Sulph.
Ferri Redacti.....āā ℈ji.
Strychniæ Sulph.....gr. j.

M.:—Fit. pil. no. xi. Sig. One three times a day.

I use the iron and quinine for general tonic purposes, and the strychnine with special reference to the paresis. I shall also direct that the region be subjected to the Faradic current daily, which may be done by applying one electrode to the perineum and the other to the pubis and hypogastric region.

NOTE.—During the first week of treatment there was improvement, and from the beginning of the second the patient could retain his water perfectly.

246 *Madison Avenue.*

ART. IV.—**Some Essential Parts of the Air, and their Relation to Health and Disease.*** By M. A. RUST, M. D., Richmond, Va.

Atmospheric air, of which we have extensively treated, in a general way in the preceding papers, is, roughly speaking, a mechanical combination of four volumes of nitrogen and one volume of oxygen; or, more accurately, 79.02 volumes of nitrogen to 20.94 volumes of oxygen.

Besides nitrogen and oxygen, various other matters, in exceedingly small quantities, occur in the air. We will here consider only such substances as are diffused everywhere through the body of our atmosphere, and which play a more or less important part in relation to organic life. The following five substances belong to this class: (1.) Carbonic acid. (2.) Peroxyd of hydrogen and ozone. (3.) Water vapor. (4.) Ammonia. (5.) Floating matter.

* Read before the Richmond Medical and Surgical Society, February 6, 1883, as a continuation of the series of papers on "Phthisis, and the Means to Prevent It."

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In following the plan proposed in my first paper of contemplating all that surrounds man and influences his health for good or for evil, we shall have to turn our steps from the broad highways of medical science and walk in the less trodden by-roads. Inexhaustible treasures lie scattered on these paths, and if you feel disappointed as we traverse them, the fault will only be with the guide.

Carbonic Acid.—The part which carbonic acid plays in the household of Nature, is an all-important one. Without its agency the maintenance of organic life on our globe is inconceivable. Each plant, under the influence of light, with its innumerable stems and leaves, is constantly receiving carbonic acid from the air; the chlorophyl granules decompose it, take up the carbon and return the oxygen to the atmosphere. Small as the amount of carbonic acid is (3 to 4 volumes in 10,000 of air), the quantity consumed by plants is astonishing. Boussingault has calculated that the average number of tobacco plants growing on one acre, absorb from the atmosphere on a single clear summer day, 154 pounds of carbonic acid. Let us imagine one of those giant trees whose weight is counted by tons. If its weight be 3,000 pounds, half of that is water; the weight of its ashes, whose constituents are derived from the soil, will be 6 to 7 pounds; the greatest part of the balance of the weight is carbon, taken from the atmosphere!

The geological and chemical action of carbonic acid, the continual deposition of immense masses of carbonate of lime on the sea-bottoms, etc., can only be alluded to here.

Corresponding to this great consumption of carbonic acid, we find an equally great supply from animal respiration, from the exhalation of decaying organic matter, and a still greater supply from the vast masses of carbonic acid given out through crevices and fumaroles in volcanic regions.

Notwithstanding incessant additions, substractions, and exchanges, the proportion of carbonic acid to the air varies but little from the average estimate of three volumes of carbonic acid to 10,000 volumes of air. The minute and accurate measurements, extending over four and more years, made by Schulze, Reisset, Thenard and others show variations amounting only to a fraction of a volume.

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But are there no variations in the course of centuries? We have no estimates transmitted from the past which enable us to make comparisons; our remote posterity will be more favorably situated. Science to-day is collecting materials for the benefit of the future. Thus much we know, that carbonic acid, unlike the fractional amount of the present day, was held in vast volumes by the primeval atmosphere. Witness the immense masses of carbon stored up in the bowels of the earth, in coal mines, oil fields, etc.

Carbon is the fundamental element in the composition of all organisms, the substratum of every form of life on our planet. From the smallest jelly speck and microscopic germ to the giant forms of plant and beast and the human brain—the whole organic world is mainly built up of carbon and its combinations; and of all the elements carbon is the only one which is never missing in any organic substance.

Our mind, striving to penetrate into the dimness surrounding the origin of the fundamental phenomena of life, may recognize in them the physical and chemical properties of carbon.

Goethe's Faust, sitting in deep meditation over his book, translates the first verse: *In the beginning was the "Word."* "*Word*"—he says this does not give the right meaning; he reflects and substitutes "*thought*"—rejects it and puts "*Force*," again rejects that, and finally translates to his satisfaction: "In the beginning was the *deed*."

Goethe's time was the time of speculative philosophy; to-day, in the age of positive science, says an eminent physiologist, we have to put it: "*In the beginning was carbon.*" This is well said; before word, thought, and deed existed, carbon must have existed. But what is behind carbon? This question will be asked as long as carbon forms a component part of the brain cell.

It is remarkable that in our great cities, with their millions of lungs, chimneys, and dirt heaps, the normal proportion of carbonic acid (between 3 and 4 in 10,000) should not be greatly altered; the fact is, that generally the proportion does not rise much above 3.5 in 10,000. The reason of this stability is the velocity with which the air continually moves;

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this motion does not allow an accumulation of carbonic acid in a particular spot, any increased supply of it being quickly diffused through the whole atmosphere. Even still air generally moves at the rate of four metres per second, a speed less than half a metre per second is no longer perceptible to our tactile sense.

The formation of fogs is the only meteorological phenomenon which, as well in the open country as in great cities, is invariably followed by an increased proportion of carbonic acid. The condensed watery vapor of the fog gathers and holds in suspension the carbonic acid as well as the floating matter of the air, and it is obvious that it will be more laden with both of these in great cities, where their sources are so numerous, than in the open country. The famous foggy air of London sometimes contains more than twice the normal quantity of carbonic acid, and along with it a proportionately increased quantity of floating matter. After prevailing for a certain time it never fails to exercise the most pernicious influence on the respiratory organs—often swelling the number of deaths from lung disease to a fearful height.

Numerous experiments have been made by scientists of all nationalities to ascertain the exact quantity of carbonic acid given off by a person in a certain time. We assume it to be, on an average, for a healthy, well-fed, active adult, 16 cubic feet in 24 hours, or 0.7 cubic foot per hour—from the lungs and from the skin—mostly from the lungs. Individuals in bad health, in repose, women and children, emit less.

Petenkofer, in Munich, with his great experimental apparatus, has made the most extensive and conclusive researches. The apparatus, built for the purpose, holds a commodious furnished room, in which a person can live, sleep, take exercise, etc. By steam power the air is changed five or six times in an hour. The carbonic acid, water vapor, etc., which are given off by the lungs and skin of the person in the apparatus, also the oxygen, etc., which he takes in, are measured and weighed. Many physiological questions formerly unsolved have thus received a final answer.

The person to be experimented on enters the apparatus at

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6 A. M., does hard, steady work till 6 P. M., with only such interruptions for meals and rest as are customary amongst mechanics. The work consists of turning a wheel, weighted with fifty pounds, seven thousand three hundred and twenty-three times in ten hours. This is thought to correspond with ordinary hard work, and the person is pretty well tired in the evening. After supper he goes to bed and sleeps till 5 A. M. The second day is a day of rest; he does nothing except some light reading, etc., and goes to bed at the same hour. The next morning (the third day), he leaves the apparatus and spends twenty-four hours outside, in order not to impair his health by protracted confinement. The fourth day he again commences the cycle—one day of work, one of rest inside the apparatus, the third outside, and so on.

His diet is the same on the working day and on the rest day in quality and quantity by weight, except that on the working day he gets six hundred grammes more of water to drink.

The main results of these researches are shown in the following table:

	TIME.	ELIMINATED. (*In grammes.*)		TAKEN UP. (*in grammes Oxygen.*)
		CARBONIC ACID.	WATER VAPOUR.	
Working Day.	Day.	884.9	1094.8	294.8
	Night.	399.6	947.3	659.7
	In 24 hours.	1284.2	2042.1	954.5
Day of Rest.	Day.	532.9	344.4	234.6
	Night.	378.6	483.7	474.3
	In 24 hours.	911.5	828.	708.9

The time at our disposal will not permit us to enlarge on the teachings of these numbers. We will only briefly point to the vastly larger quantity of carbonic acid emitted on the working day to that which is emitted on the day of rest.

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The elimination of carbonic acid is also larger in the day time than it is at night, not only in the night following the working day, but also in the night following the day of rest. The mere exercise of the senses enhances the interchange of matter and vital activity. We farther observe a great difference between day and night, not only in relation to carbonic acid, but oxygen. By day we eliminate more carbonic acid than by night; *per contra*, we take in more oxygen by night than by day. This inverse proportion is still more marked on the working day. Of the whole amount of *carbonic acid* eliminated in the twenty-four hours of the working day, over *two*-thirds are emitted in the day and *one*-third in the night. Of the whole amount of oxygen taken up in the twenty-four hours of the working day, *one*-third is taken up in the day and *two*-thirds in the night. It is evident that a great part of the carbonic acid produced in the day is formed of the oxygen taken up in the previous night, during rest and sleep; and if through exercise or work in the day, we produce a greater amount of carbonic acid, and hereby consume a great quantity of oxygen, this amount of oxygen is replaced in the night during rest and sleep. This enables us to set again vigorously to work in the morning.

Exercise enhances the respiratory function and helps to preserve the healthy condition of the lungs. During exercise breathing increases in frequency and deepness to relieve the organism of the surplus of carbonic acid, which would otherwise raise the thermal level of the blood. We may assume a similar effect for the increased elimination of water, not only during work, but also in the night following a day of toil; this elimination counteracts elevation of temperature.

We also learn from these numbers that, if in a city like New York, Sabbatarians could carry their point and enforce absolute repose on the seventh day, a million of active individuals would give on that day to the atmosphere about six hundred and fifty thousand pounds less carbonic acid, and over two million pounds less of water vapor, and would take from the atmosphere about four hundred and fifty thousand pounds less of oxygen than on any other day. These are startling figures, apt to make people tremble for the consequences;

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but let them be re-assured; on our atmosphere such weighty losses and gains would produce no stronger effect than a homœopathic granule would on a wild elephant. As for the active individuals, through the extension of a state of sleep and half-sleep, over about thirty six hours (from Saturday night till Monday morning), a disturbance of the relation between in-coming oxygen and out-going carbonic acid would ensue, whose final result might be some gain of fat and duncishness, some loss of vital energy.

In our dwellings, where the sources of carbonic acid are so numerous, and the movement of the air so slow, we find the normal proportion of carbonic acid considerably enhanced; more or less, according to the size of the rooms, the number of breathing persons, the difference of temperature between inside and outside, and the means of ventilation.

The function of our lungs, lights and fires and other household arrangements are unavoidable sources of such increase of carbonic acid, which increase does no harm, so long as a certain limit is not over-stepped. In the best ventilated houses we seldom find the volume of carbonic acid below five; in the average house it is generally seven in ten thousand. It is generally conceded that this is good air; only when it approaches ten in ten thousand we have reached the limit where good air ceases and bad air commences. Sixteen in ten thousand is no longer compatible with good health. It is, as Petenkofer has pointed out, not the increased amount of carbonic acid by itself which proves so hurtful; but along with the enhancement of carbonic acid, if man or beast is its source, goes a proportional pollution of the air, with various products of respiration, perspiration and other bodily functions, diffusing in the air of a closed space, vapors, gases and cast off particles of solid matter. This floating matter is not measurable, but carbonic acid is; hence, from the ascertained increase of carbonic acid we can form an idea of the quantity of the invisible matter suspended in the air of such a space, and to what degree that air has been breathed and re-breathed by the persons present.

Another source of air contamination is gas-light. A gas flame behaves like a breathing organism; it consumes oxy-

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gen, and hereby enhances the proportion of carbonic acid; on the other hand, it diffuses in the air the irrespirable products of its combustion.

If you receive company in the Liliputian parlor of the modern tenement, low-pitched, with neither side nor back windows, you certainly bestow no benefit on your guests by lighting all the burners of the chandelier over their heads.

An accurate measurement of the amount of carbonic acid in the air is attended with great difficulties and loss of time. Nevertheless, the physician ought always to be in a position to give an approximate estimate.

A. Smith, and more recently G. Lange, have devised speedy methods of estimation. In regard to simplicity and and expediency, Lange's minimetric method can hardly be surpassed. I will here specify as much of this method as is necessary for practical purposes.

The more carbonic acid the air to be examined contains, the smaller will be the volume of it requisite to produce precipitation in a fixed volume of lime water; the purer the air, the larger must be the volume taken to produce precipitation in the same fixed volume of lime water.

One has to provide: (a) a graduated glass to measure fifteen cubic centimetres of lime water (not quite three and a half drachms); (b) a set of six narrow-shaped French medicinal vials, of assorted sizes (for sale in Northern cities in every chemical store). The vials are rinsed with vinegar, dried, corked and kept ready for use.

To examine the air of a room or house, start with the smallest vial; (No. 1) blow the air into it with a pair of bellows; pour in fifteen centimetres of freshly prepared lime water; cork and shake well; if cloudiness appears, it indicates (about) sixteen volumes of carbonic acid in ten thousand of air; this is bad air. If the lime water remains clear, the air contains less than sixteen volumes in ten thousand, and the next vial must be tried.

To judge the cloudiness correctly, paste on the vial, just below the level of the liquid, a narrow slip of paper marked with a penciled cross, the pencil mark facing inwards. The lime water is at the due point of cloudiness when the pencil

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mark viewed through it is no longer visible. Open air can only be tested with vial No. 6, the largest of the set.

For ordinary purposes, two vials of the set (No. 3 and No. 5), will be sufficient, and, in case of emergency, a narrow-shaped 8-ounce vial and half an ounce of lime water will enable us to judge between good and bad air.

CAPACITY OF THE VIALS IN GRAMMES.	VOLUMES OF CARBONIC ACID IN 10,000 VOLUMES OF AIR.
No. 1—150 indicates.....	16
No. 2—200 "	12
No. 3—250 "	10
No. 4—300 "	8
No. 5—350 "	7
No. 6—450 "	3

[TO BE CONTINUED.]

ART. V.—**Disturbance of Nervous Functions by the Presence of Lumbrici and Tænia in the Intestinal Canal.** By EDWARD C. MANN, M. D., New York. Sunnyside Private Hospital for Nervous Diseases, the Opium Habit and Inebriety, etc., Brooklyn, N. Y.

It is a fact I think somewhat overlooked in this day of cerebral localization, that the presence of worms in the intestines not unfrequently gives rise to severe nervous symptoms which can be relieved only by anthelmintics. We have in these cases peculiar symptoms and a peculiar physiognomy. There is obstinate headache, general neuralgia, sight and hearing often dull, some abnormal thirst, and invariably a pale face. The headache in these cases does not seem to be limited to any particular part of the cranial region, but is diffused, or frontal and obstinate. There may be marked giddiness and buzzing in the ears; there may be tremor of the hands. There is, in certain cases, a general sense of uneasiness all over the abdomen, with, perhaps, at times a sharp colicky pain. In women, there may be marked hysterical symptoms. In other cases there may be a troublesome, dry cough, which no cough mixture seems to relieve, but which ceases upon the expulsion of a lumbricus or tænia. Tetanic phenomena have been known to have been excited

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by the presence of lumbrici in persons who were already in a condition favorable to the development of such phenomena. Several English surgeons of eminence have believed that there was in their cases an intimate relationship between tetanus and the presence of lumbrici, which we find, after death, in the intestines. There may be convulsions, from slight intensity up to severe epileptiform seizures. The hysteria may be intense, and may be complicated by cataleptic phenomena in these cases. There may be cerebro-spinal affections and partial or general convulsions, melancholy, hypochondriasis, abdominal spasms, dyspnœa, nausea and vomiting, pains in the abdomen, disordered digestion, irregular appetite, colic, undulatory movements in the abdomen, and dizziness.

In nearly all cases of tape-worm, and less frequently with other intestinal worms, we see quite severe nervous phenomena—the most frequent, as I have said, being headache, dizziness, involvement of the special senses, of which the most noticeable are buzzing in the ears and dark spots and flashes before the eyes, and imperfect vision, with some tremor of limbs. The general neuralgia is very frequent, and very troublesome. The convulsive phenomena are more frequent in children, and are oftener due to the round and thread-worm than to the tape-worm. The immature form of the tape-worm is the cysticercus cellulosæ; and it abounds in pork, and in Poland, Hungary, England and our own country, where many pigs are bred, the tænia solium abounds, and where there are few pigs the tape-worm is almost unknown. I do not think that we thoroughly appreciate, as we should, the serious nature and frequency of the nervous symptoms of intestinal worms.

If, in conclusion, any patient presents himself or herself to us with obscure nervous symptoms—with dull pain in the head, dizziness, buzzing in the ears, dullness of the eyes, which may be surrounded by a dark circle—œdematous eyelids, suggesting Bright's disease, dilated pupils, pallor of the face, odd movements of the nose and mouth, alternate loss and excess of appetite, offensive breath, furred tongue, itching at the nose, anus or vulva, grinding of the teeth during

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sleep, constriction of throat, swelling of the abdomen, with perhaps shooting pains in this region, a sense of pinching about the umbilicus, a feeling in the morning as if a foreign body were moving in the bowels, the patient reporting that under a farinaceous diet, with hot bread and coffee, and marked depression of spirits, we shall do well to treat such a patient with anthelmintics quite vigorously and periodically, and we shall probably be rewarded by the expulsion of tænia or lumbrici, as the case may be, and we shall then, after building up the nervous system by appropriate tonics, find that the obstinate headache, pale complexion and inveterate neuralgia, giddiness and other obscure phenomena which have made life miserable for our patient, have entirely disappeared.

Clinical Reports.

Chronic Kidney Disease; Fatty Heart; Apoplexy; Hemiplegia—Death. By HENRY P. WENZEL, M. D., Milwaukee, Wis.

On *March 19th*, 1882, E. H., age 51, retired baker and confectioner, after a hearty dinner, on rising from his chair, suddenly sank down to the floor. He had not been previously seriously ill; but had for years been a heavy drinker; however, during the two preceding years, he had kept very temperate, drinking only a little beer occasionly. The family stated that he had not lost consciousness; there were no spasms or convulsions, but he was perfectly helpless, and his face was purple; he was getting weaker lately; "his head felt warm for months," and "he frequently was dizzy for a short time."

We saw the case at 3 P. M., about an hour after the attack. The patient is five feet four inches in height, well built, full figure, rather stout, with a short neck, and weighs about 180 pounds. He lay on a lounge. The face was purple; he was breathing slowly and deep; pulse, 100, and with a tumultuous heart; temperature, 99° F.; appearance rational. On request, his mouth was but partially opened and drawn to the right; the tongue remained motionless; he could neither whisper nor speak. The pupils were narrowly contracted, equal in size, and re-acted very sluggishly; the sclerotics were congested, and the globes turned upward

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and to the right—the left eye deviating most. The left half of the face was unimpressible to pain, and the left arm and leg were powerless in motion and sensation. Tickling the sole of the left foot had no effect whatever, and pricking it with a pin caused a slight motion in the opposite member. Both left extremities were very cold.

He mumbles some unintelligible disconnected words with an effort. Vapor of ammonia has no effect on olfaction. A strong concentrated light appears painful to the eyes.

The urine had escaped, but the rectal sphincters were intact. He was directed to have a teaspoonful of tho following mixture every two hours.

℞ Potass. bromidi.....ʒij.
Tr. digitalis.....f. ʒj.
Aq. camphoræ.....ʒiv.

M.:—Ft. sol.

At 9 P. M. he had slept several hours. The tongue points sharply to the left. There is no headache, but the "head feels heavy." Amnesic aphasia causes annoyance. The pupils re-act more promptly; pulse, 80. Milk, *ad libitum*.

20*th*. Rested well during the night, but fell out of bed during the morning. Excruciating pains in the cervical region. Urine neutral, limpid, sp. gr., 1012; about one-third albumen when treated with heat and nitric acid.

21*st*. Pulse, 80; pain ceased after applying a belladonna plaster. The arteries are atheromatous; valvular sounds harsh, but no well defined abnormal sound or friction murmur; heart enlarged. Tickling of the left foot is described as "ants crawling over the skin."

23*d*. Pulse, 72; slept all night; severe pain in left arm; slight motion of left toes. He passed 60ʒ of clear urine; sp. gr. 1012; one-third albumen. My friend, Dr. Schneider, reports the following characteristics of a sample microscopically examined: "urine salts; cholesterine plates; very few blood corpuscles: large numbers of leucocytes; a few pus corpuscles; hyaline casts and fibrine cylinders in abundance."

23*d*. Pulse, 72; 64ʒ urine during last twenty-four hours. Marked hyperæsthesia in both left extremities; slight motion in left leg. Thirty drops fluid extract of ergot as directed.

24*th*. "Could not sleep all night, because my head began to throb about an hour after taking the medicine (ergot), and kept up all night." To use the bromide mixture instead of ergot.

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25*th*. Slept soundly all night; there is a little sensation in the left leg, but none in the arm. Ergot was ordered again with the same results as before.

26*th*. Sixty ounces urine passed during last twenty-four hours.

27*th*. Pulse, 80; feels better; less hyperæsthesia.

℞ Potass. brom.....ʒij.
Fl. ext. cocoe.....ʒj.
Elix. ammon. valerian.....ʒix.
Elix. simplicis.....q. s. ad. f. ʒiv.
M.:—Ft. sol. Sig.:—Teaspoonful every five hours.

April 5*th*. Sixty ounces of acid urine passed last twenty-four hours; sp. gr., 1010; albumen markedly less. Microscopic examination by Dr. Schneider. "Triple phosphates and other salts; hyaline casts; fibrine cylinders; blood globules; a few pus corpuscles; leucocytes; epithelial cells, some of which appear ciliated; however, a coccus may be attached to an epithelial cell; the specimen contained almost everything found in urine."

10*th*. Appetite very good; 40ʒ slightly acid urine; sp. gr., 1010; about one-twentieth albumen. The muscles of the leg respond to stronger faradic currents; there is no response in the arm. ℞ Liq. strychniæ bromidi, three drops, *ter die*, increasing one drop daily. Massage, volatile liniment to both extremities to gratify the family and for moral effect on the patient.

Faradism was resorted to on alternate days. The diet was composed of sweet milk, stale bread, rice or oatmeal porridge, raw eggs, oysters, and a little lamb or fowl meat; also one pint of imported Erlangen beer daily, and Hunyadi Janos water, q. s., to keep bowels regular.

May 2*d*. He is able to ambulate through the room with a cane. He gains strength; the appetite is good; there is no headache. The paralysed limbs are warm, but flabby; the leg is much stronger than the arm; the latter can be moved, but the grip of the hand is very feeble. The quantity of urine varies from forty to sixty ounces; it is pale, acid, sp. gr., 1012, and contains about one-twenty-fifth albumen by volume. Fish is added to his diet.

9*th*. When the temperature falls below 60° F., he complains of severe cold in both left extremities, and his "mouth is stiff on the left side."

June 1*st*. Electricity discontinued. Locomotion is easily accomplished with the assistance of a cane. The arm im-

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proves very slowly; the grip is still feeble. The patient is sent to the country. *He must use meat sparingly.*

26th. Returned to-day; appetite good; body well nourished; intellect weaker; condition of both limbs the same as on the first. There is no œdema. He sleeps soundly. The urine is slightly acid, opaque, sp. gr., 1010, albumen largely increased.

℞ Fl. ex. cocoe.....℥iij.
Elix. gentian ferrat.....℥j.
M.:—Liq. Teaspoonful three times daily.

August 10th. Mental weakness marked; physical condition worse; he passed enormous quantities of urine—seven pints and more daily; clear and "pearls like beer;" bluish in color; sp. gr., 1010; increased albumen; casts, etc., plentiful; feet swell; appetite fair.

October 7th. After returning from the barber shop to-day, and while trying to sit down, he fell suddenly and could neither speak nor move. The face was drawn upward and to the right; complete ptosis of left upper eyelid; both globes turned upward and to the right; pupils contracted and sluggish; the nose is dusky red and the tip swelled; the tongue is immovable; there is total loss of motion and sensation in both left extremities, and the right leg is paralyzed; the urine is voided frequently, is acid and limpid; sp. gr., 1008; heat, 85, and regular.

8th. Face less drawn; nose more red and swollen; tongue points sharply toward the left; inarticulate muttering; excruciating pain referred to the base of the brain; marked dyspnœa.

9th. Pulse, 85; temperature, 99° F.; no headache; very nervous; sibilant râles.

12th. Pulse, 100; temperature, 100.5° F.; speech "very thick."

15th. Urine and fæces passed involuntarily: slumbers during the day, and is very restless at night.

November 1st. Mental wreck; harsh whispering speech; severe dyspnœa; Pulse, 128, and feeble; temperature, normal; eyes diverge upward and outward; pupils irregularly dilated; the tongue cannot be protruded beyond the teeth; bronchial râles; intense and continuous tympanitis, although flatus passes very frequently; the dyecta still pass involuntarily; the urine is thick, creamy and offensive, but only a few drops can be withdrawn by catheterization; the tissues

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are soft and flabby; the left extremities are warmer than the right; opiates at night to quiet and produce sleep.

13*th*. Hypostatic pneumonia; extreme dyspnœa; sacral ulcer.

14*th*. Unconscious; abdomen tense and resonant; breathing extremely difficult.

15*th*. Died at 9.50 A. M.

Autopsy twenty-five hours after death, assisted by Dr. R. N. Hawley; body well preserved; length, five feet, four inches; weight, about 160 pounds; rigor mortis marked on the right side, but not apparent on the left; subcutaneous adipose tissue over an inch thick; the brain, heart, lungs, liver, stomach, intestines, spleen, kidneys and bladder were examined.

The brain weighed fifty-two ounces avoirdupois; about four ounces of serum escaped when the dura mater was opened; the membranes were rather pale; the arteries were atheromatous throughout, and numerous small aneurisms were found on the middle and posterior cerebral arteries; nothing abnormal was otherwise discovered in the left hemisphere. The following lesions were found on the right side: 1st. A hard, firm, chocolate-colored clot as large as a hazelnut was found in the ascending frontal convolution near the top; the brain tissue in the vicinity was not affected. In the lateral ventricle was a large dark-brown clot extending into both corneæ; the corpus striatum was plowed up; the boundaries of the ventricle were broken down; the adjacent tissues very friable; beneath the clot was a small quantity of pus; the clot extended into the third ventricle, and the fourth ventricle was stained orange red. In the first temporal convolution, near its base, was a deep orange-colored clot as large as a pea, friable, and the surrounding tissues were stained a deep red. The cerebellum appeared normal. The pons was flattened and stained redish on the outside; an aneurismal sac, as large as a cherrystone, on the posterior upper and outer aspect of the pons, was ruptured, but no clot was found—only the staining alluded to. As already stated, the fourth ventricle was stained; beneath its floor were five cavities, each of the size and shape of a grain of rice; each cavity was stained orange red, and was empty.

The cerebral tissues were softer than normal, the white matter especially so.

Heart.—The pericardium was adherent to the pleura anteriorly; the sac contained about two ounces of light yellowish

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fluid; the heart weighed 20½; its external surface was covered with a thick layer of adipose tissue; the left ventricle was markedly hypertrophied; the right ventricle dilated and attenuated; the walls were fatty; the cavities contained about six ounces of very dark fluid blood; the coronary arteries admit a bristle, and are pervious; the veins enlarged, tortuous and filled with dark fluid blood. The pulmonary valves are normal, the tricuspid valves clubbed, the mitral valves elongated, clubbed, and of a deep flesh color; the aortic valves are clubbed and studded with small warty excrescences, hard as cartilage. The aortic arch, from its base, is fatty and calcific, in large patches, *i. e.*, the inner and middle coats—the fibrous coat is fatty.

The lungs are compressed, the bronchia filled with frothy mucus, the lung tissue with dark colored fluid blood. The bronchial rings are in an advanced stage of ossification.

The liver is enlarged, the gall-bladder is enclosed and congenitally adherent on its upper surface to the liver; its sulcus is absent. Glisson's capsule encloses the gall-bladder like a sac; it contains two ounces dark-green fluid bile.

The spleen weighs eight ounces; one hundred and eighty-six grains is six inches long, four inches wide, and about an inch thick; it has five distinct (congenital?) notches in the inferior border; it is normal in color, but very friable.

The stomach and intestines are disturbed with gas to the utmost; the diaphragm is pushed up to the fourth intercostal space; the liver is also displaced upwards; there are some post-mortem discolorations; the colon and rectum contain a few scyballous fæces; the omentum is loaded with fat.

The kidneys weigh five ounces and five ounces and one drachm, respectively; they were surrounded by a layer of fat; the capsules are removed with difficulty; both kidneys contain a number of cysts, subcapsular and cortical, from the size of a pea to a bean, filled with straw-colored fluid, apparently serum. The bladder contains a few ounces of fetid urine, but is otherwise normal.

Remarks:—About eighteen months prior to his prostration on the 19th of March, he had suddenly fallen and lost consciousness for a few minutes, but attended to his business the day after; the family could not say whether there were any spasms during the attack. He had been drinking for years, but during the last few years was very temperate.

Whether the fatty degeneration was primary is perhaps difficult to decide; but I incline to the opinion that atheroma

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of the circulatory vessels was the first factor in the subsequent changes.

The sacral ulcer would be another proof of Charcot's assertion.

The excessively difficult breathing was doubtless due to effusion into the fourth ventricle and irritation or injury to the pneumogastric nerves; the bloating was in part caused by the same channel, and the excruciating agony referred to the base of the brain, shortly before dyspnœa and tympanitis appeared, proves that a vital part had been invaded. Whether the destruction of the sphincter's power was caused by the brain lesion alone, or whether the cord was also diseased, cannot now be determined; in fact, the surprise is that the patient lived so long; in view of the dangerous lesions, it must be taken for granted that the selection of food and quiet and composed condition of the patient prolonged life.

The case was hopeless to recovery from the first, and the drugs prescribed were intended more as a stimulant tonic than a remedy against a fatal lesion. The action of the ergot was certainly very peculiar, especially when the diseased blood vessels are considered, and the muscular coat had lost its power to act energetically.

The clot found in the ascending frontal convolution was kept exposed to the air for three months, and remained perfectly solid; it was then placed in ol. eucalypti, and except a reddish tinge of the liquid, the clot appears as solid as ever at this date.

Vesico-Vaginal Fistula, Atresia Vaginæ and Ruptured Perinæum. Treatment and Result. By S. M. MILLER, M. D., Rogersville, Tenn.

Mrs. J——, Sneedsville, Tenn., aged 29 years, primapara, nervous temperament, general health moderately good. Gave the following history: About March, 1882, had suffered a tedious confinement lasting over four days, and was at last relieved by instrumental means. Some days subsequently, extensive sloughing took place, indicated to her by incontinence of urine, and the discharge of fleshy-like masses. Recovery took place slowly, and no trouble, except the in-

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continence of urine, was suspected until three or four months prior to my call upon her, at which time she had symptoms of menstruation, and finding that the discharges did not escape, became apprehensive and applied for treatment.

Upon taking charge of this case March 17th, 1883, the following condition was found to exist: A rupture of the perinæum, extending to within two lines of the anus; the vaginal canal was reduced to a small pyriform opening, terminating in the vesical cavity, at the fundus, and involving the meatus urinarius internus; above this point the vagina was perfectly closed. Upon introducing the finger, it passed at once into the bladder, there being no remains of the canal above to allow any farther progress.

With the assistance of Dr. J. R. Walker, I proceeded, anæsthetized, to operate for the relief of the atresia. For a depth of two-thirds of an inch dissection was made through inelastic white cicatricial tissue, upon which the upper portion of the vagina was reached. Instead of meeting at this point a collection of retained menstrual fluid, as could reasonably have been expected under the circumstances, this portion of the vagina was filled by a mass of organized tissue, easily broken down with the finger, and quite vascular. The after-treatment consisted in preserving the lumen of the canal with a Hodge pessary, antiseptic washes, etc.

After some trouble in keeping adhesions from taking place through the opening in the pessary, in consequence of the inconvenient situation of the patient, the case was deemed ready for further treatment.

June 2nd.—Assisted by Drs. J. R. Walker and J. M. Pierce, an operation was made for the relief of the vesico-vaginal fistula. The fistulous opening, one inch in diameter, was pared transversely, drawn together and closed by silver wire suture, and the ends of the wire confined by split shot. The free ends of the wire were cut short to the shot, and protected by a pledget of absorbent cotton. A retained sigmoid catheter was employed, the vaginal canal and bladder being daily cleansed with warm water.

June 12th.—Sutures removed. Opening only partially closed. Posterior surface of vagina irritated by cut ends of wire, notwithstanding the precaution of protecting them continually with cotton.

June 19th.—With the same gentlemen as assistants, the operation was repeated in the same manner, except that instead of cutting short the wire, they were twisted to hold the

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wound secure, drawn together in a bundle and allowed to protrude just beyond the vulva. The same general after-treatment was observed, and upon the removal of the sutures June 29th, the fistula was neatly closed, and the bladder in a condition to perform its natural function.

No treatment has yet been given the ruptured perinæum, but will probably be done hereafter.

Remarks.—The above case presents some features worthy of special mention. The vaginal walls and the margin of the fistulous opening into the bladder were made up of hard scar tissue, and to a considerable degree bound to the pelvic walls by cicatricial adhesions—the result of the extensive slough. This condition rendered the case unpromising. The organized mass found in the upper region of the vagina, filling its entire capacity and distending the os externum, must have been the unabsorbed remains of menstrual discharges. That it was organized is proven by its vascularity and a disposition it manifested to adhere through the opening in the pessary, yet that this should be the case seems curious.

I do not know of any reported case where the wires were treated as in this last operation. This method of leaving the wires wrapped in a bundle and protruding from the vaginal outlet, simplifies the operation—by removing all source of irritation; by affording a facility for drainage, not to be so easily obtained in any other manner; and by leaving the wires under the perfect control of the surgeon, so that all trouble of removal is eliminated.

Arnica Poisoning. Dose—One Ounce of the Tincture. By WM. A. THOM, JR., M. D., Norfolk, Va.

On Friday, April 6th, I was called to see Luther Philips, a negro laborer, aged 24 years, who four hours before had taken a fluid ounce of the tincture of arnica. I found him lying in a state of absolute insensibility, breathing eighteen times to the minute; not stertorous; pulse 100, full and strong; temperature normal; pupils slightly contracted, but not sufficiently so to attract attention without close examination. He was so thoroughly insensible that the application of the flame of a lamp failed to produce the slightest

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reflex action; the conjunctivæ were without sensation. I was told that half an hour after taking the arnica he had been found lying as I found him; there was no vomiting or purging. Remembering Dr. Bertin's case, published in the *London Lancet* of November 19th, 1864, in which collapse came on ten hours after the ingestion of the drug, I at once ordered drachm doses of brandy every fifteen minutes, with hot pediluvia every half hour. At six o'clock P. M., ten hours after taking the arnica, he began to show signs of returning sensibility, only manifested by reflex response to cutaneous irritation. At twelve at night he became wildly delirious, remaining in this state for several hours, after which he fell asleep, awakening on the morning of the second day with dizziness and inability to walk straight, great burning pain throughout the alimentary tract. During the day he had three very large watery evacuations, with profuse diuresis. On the third day he was quite well.

The chief interest of this case lies in the fact of its extreme rarity. In Bertin's case there were no symptoms until the collapse came on ten hours after taking the drug. In mine the effects were immediate, and there was never the slightest sign of collapse. In both, brandy and hot water were used with like good effects.

Analyses, Selections, etc.

Heart-Puncture and Heart-Suture as Therapeutic Procedures. In a paper read before the College of Physicians of Philadelphia, January 3, 1883, Dr. John B. Roberts, of Philadelphia, says: It is more than probable that in a few years puncture of the heart wall (cardicentesis), with direct abstraction of blood by aspiration, will be recognized as the best treatment in cases of greatly dilated or much distended right heart, with intense pulmonary engorgement; and that incision of the pericardium, with suture of the heart-muscle, will be accepted as proper in cardiac wounds.

That punctures of the heart are comparatively harmless, has been well known to many for some years. In 1872, Roger, while performing pericardentesis on a child with pericardial effusion, thrust the needle into the right ventricle and withdrew about 6¼ Troy ounces (200 grms.) of pure venous blood. The boy, who was aged five years, became pale, sweated, and had an imperceptible pulse. The with-

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drawal of the pericardial fluid, accomplished prior to the heart injury, was beneficial; and the cardiac puncture did no permanent mischief, for the patient recovered. Death occurred five months later from long existing dilatation and valvular disease of the heart.

In Hulke's case, a woman with pleuro-pneumonia was supposed to have large pericardial effusion, and a trocar was introduced through the fourth left intercostal space. Nothing escaped except a drachm of venous blood, after which the patient seemed relieved of dyspnœa. She died four weeks later from a complication of diseases, and the autopsy revealed cardiac dilatation and valvular changes. The abstraction of blood seemed to relieve the distended heart much better than phlebeotomy would have done, as was evinced by the diminution of threatening symptoms and the decrease of the area of dullness.

Cloquet, Bouchut, Legros and Onimus have also observed the apparent innocuousness of wounds of the heart made by capillary trocars. Steiner found, ten or more years ago, that electro-puncture needles could be quite safely introduced into either ventricle, provided they were at once withdrawn.

It has been considered less safe to puncture the auricles; but the interesting paper of Dr. Benj. F. Westbrook (*Medical Record*, December 23, 1882) seems to show that our fears are as unfounded as were those of our predecessors in regard to ventricular puncture. It is, in truth, to call attention to his case of harmless *intentional* cardicentesis and to his researches in the surgical anatomy of the operation, that I have been led to refer to the corroborative evidence of the cases mentioned above.

I have with much satisfaction, as have many others, done venesection at the bend of the arm for the temporary relief of the distressing symptoms of dilated heart, and for the dyspnœa due to the pulmonary engorgement of acute pneumonia. If, however, a few *drachms* of blood drawn directly from the heart give the relief that could only be afforded by taking a similar number of *ounces* from the veins of the arms, it seems proper to adopt the former measure. The subsequent circulatory depression from anæmia would undoubtedly be less than after the latter operation. It is manifestly necessary, however, to determine that cardicentesis is innocuous before it can take the place of venesection. The above-mentioned cases and Dr. Westbrook's experience tend to show that such is the fact.

Dr. Westbrook believes that the proper place to perform

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the operation is in the third costal interspace close to the *right* edge of the sternum. This situation enables the operator to tap the auricle without injuring the right internal mammary vessels, and with little danger of striking the tricuspid valve. My own preference would be to perforate the ventricle of the right heart by introducing the needle through the fourth interspace, about one and a half or two inches to the *left* of the median line of the sternum. Dr. Westbrook's opinion, however, is entitled to more deference than mine, because he has studied the subject with special reference to cardicentesis, while my special investivations have been limited to the consideration of pericardicentesis.

Further experimentation in heart puncture for the relief of cardiac distention and pulmonary engorgement is requisite, but it is probable that it will soon become a well-recognized surgical procedure in selected cases. Pericardicentesis has already taken that position, and there is no reason to believe that cardiac surgery will stop its march with the demonstration that the pericardium can be treated as the pleura.

In October, 1881, I read a paper before the Anatomical and Surgical Society of Brooklyn, in which I advised resection of the costal cartilage and incision of the pericardium for removal of foreign bodies in the pericardial sac; and at the same time said: "The time may possibly come when wounds of the heart itself will be treated by pericardial incision, to allow extraction of clots, and perhaps to suture the cardiac muscle." It seems as if this time had now almost arrived, for Dr. Block has not only expressed a belief that death can be averted in many cases of heart-wounds by simple incision of the pericardium to allow escape or extraction of the clots which cause pressure and death, but has also undertaken to demonstrate by vivisectal experiments that suture of the heart is a simple operation and requires but three or four minutes. He finds that opening of the right and left ventricles, and entire compression of the heart for the application of sutures, can be supported by rabbits for several minutes. During suturing he seizes the apex of the heart and draws the organ forward until the traction prevents the escape of blood from the wound. Sutures are then introduced, or the orifice closed by ligation. Even if cardiac pulsation and the respiration stop during this mechanical interference with the heart's movement, death, he asserts, does not necessarily ensue. These experiments are even more important than the researches spoken of in regard to heart-puncture.

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Bromide of Ethyl the Most Perfect Anæsthetic for Short Operations.—Dr. J. J. Chisolm, Professor of Eye and Ear Diseases in the University of Maryland, Surgeon in Charge of the Presbyterian Eye and Ear Charity Hospital, Ophthalmic Surgeon to the University Hospital, etc., of Baltimore, says: The recumbent posture I consider essential for the safe administration of any anæsthetic, whether it be chloroform, ether or ethyl, hence these agents are not safe remedies at the hands of dentists, who place their patients in a sitting posture. Preparatory to the inhalation of the bromide of ethyl I have not found it necessary to give whiskey. The only precaution I take is to loose the neck clothing and have the patient lie down with the head only slightly elevated.

My experiments have taught me that the mode of administering the ethyl should differ totally from that used in giving chloroform.

Instead of a chloroform vapor freely diluted with atmospheric air, a saturated ethyl vapor must be inhaled, to the exclusion of atmospheric air, in order to obtain speedily and effectually narcosis.

In my early experiments with this new agent I had not yet discovered this fundamental principle, and hence did not obtain good results. I voted bromide of ethyl a failure, because in common with other experimenters, I was too timid, or rather I should say too ignorant of its peculiarities, to push the ethyl vapor in the concentrated form, which I have since found necessary to obtain good results. By my present method of administering it, I can obtain perfect ethylization in patients in from twenty to sixty seconds, and have no after consequences of nausea or dullness of feeling.

The best inhaler for the giving of the bromide of ethyl is a thick towel folded into the form of a small cone with closed apex. Between one of the folds of the towel I place a sheet of paper, which makes the cone nearly air tight. The base of the cone must be wide enough to enclose both mouth and nose. The soft material of which the inhaler is made enables the rim to be kept firmly in contact with the face, so as to exclude air from entering. I always instruct the patient how to make long inspirations, and inform him that he must do this, notwithstanding the fact that he will feel somewhat stifled. I also try to give him confidence by assuring him that a very few inspirations will but him to sleep. Usually I make him go through the process of strong respiratory movements in advance, so that he will know exactly how to

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proceed. Into this towel cone I pour about one drachm of the bromide of ethyl and immediately invert the inhaler over the nose and mouth of the patient, holding its edge down firmly over the face. There is no fear of creating asphyxia, as all air cannot be excluded, and the height of the cone makes a considerable air chamber into which the patient breathes.

Children usually struggle to escape from the apparatus. *The cone, however, must not be removed from the face for an instant until anæsthesia is produced.* At first some patients will resist the breathing of the vapor, but there is no fear that they will not catch their breath in time. Should children cry, it only insures respiratory efforts, which the more surely and quickly will bring about the introduction of the vapor into the lungs. As a rule, a dozen full inspirations are all that are needed to produce deep narcosis. I recognize this desirable condition by a stoppage of all struggling. I have had deep sleep brought on by the sixth inspiration, when complete relaxation ensues, with quiet breathing, and an absence of reflex irritation should the conjunctiva be touched. The patient retains the usual healthy color of lips and cheeks as if in ordinary sleep, and the pulse becomes slower and stronger as the narcosis becomes profound. Thirty seconds, as a rule, is sufficient to bring about this desirable condition, and have the patient ready for operation.

I have not found this anæsthetic sleep last more than two or three minutes, often not so long.

Usually the patients awake suddenly and as completely as they would do from ordinary sleep. They are able to get down from the operating table without assistance and walk off without staggering, and with brain clear to answer correctly any question; in fact, quite themselves.

It took me some time to acquire such confidence in the safety of the remedy, as to apply it in the concentrated form needful to obtain its fullest benefits. To the uninitiated it looks like cruel work to keep the cone of a satuated ethylized vapor over the face of a struggling patient. *I am convinced, however, that in no other way can quick, complete and safe anæsthesia be obtained by it.* Fortunately the struggling is very soon over, and quiet sleep speedily ensues.

My experience with the bromide of ethyl will now exceed 400 cases, of which upwards of 300 are within the past year. I am beginning to be familiar with its administration and its effects. *I now know what is to be obtained by it, and what not to expect from it.* I give it without hesitation, in any case,

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to avoid painful manipulation. I have used it as often as six times a day, and I administer it on an average, certainly once every day. In the last week I have given it fifteen times. For office use I find it invaluable, on account of its promptness, efficiency, evanescent nature of the anæsthesia induced, the absence of nausea, and the perfect comfort with which patients operated upon can leave my office within a few minutes after the ethylization. Its use in my every-day experience does not interfere with the routine of office practice, nor occupy more time than I give to an ordinary office consultation, a very important desideratum to those who have restless patients awaiting their turn in the reception room.

Those who will use it by a single inhalation, to produce a short, deep sleep, and not resort to a mal-administration of this very valuable, powerful agent for a continued anæthesia, which it is incapable of sustaining in safety and in comfort, will become as enthusiastic as I am over its brilliant results. They will in time learn to consider it, as I do, the most perfect of anæsthetic agents for quick, painful surgical work. It can never take the place of chloroform or sulphuric ether where any heavy operations are to be done. These well-known and tried anæsthetics must continue in favor for all tedious operations, and will be used in minor surgery by those who manipulate slowly and who do not have prompt, quick assistants. But when one can take advantage of a primary anæsthesia from the first administration of the bromide of ethyl, and having made every preparation in advance, will manipulate qnickly, the new anæsthetic leaves nothing to be desired.

I will repeat, "can anything be more brilliant in surgery than a successful operation for squint, where an ugly deformity of years standing is promptly, thoroughly, safely and surely removed in less than one minute of time—fifty-two seconds for ethylization and operation?" This is the nearest approach to magic in the art of surgery.—*Maryland Med. Jour.*, Jan. 1, 1883.

Elastic Tension Therapeutically Utilized in Plasters.—Dr. M. Josiah Roberts, of New York, in the *Medical Record*, April 1, 1882, says: Some years ago the late distinguished Prof. John T. Darby directed my attention to the important role which India-rubber played in practical surgery. The mechanical principle upon which its value depended, namely, elastic tension, soon became apparent. It was also evident

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that this elastic tension was a force that could be exerted in any direction, and developed by a great variety of substances. Since that time I have made use of elastic tension in the mechanical treatment of a diversified class of cases. The usefulness of this mechanical principle is so manifold, that I am astounded it has not received more general recognition as one of the fundamental principles of mechanical therapeutics.

In a paper which I read before the Medical Society of the County of New York, January, 1882, attention was incidentally called to the benefits to be derived from the use of elastic adhesive and elastic medicated plasters in the treatment of chronic articular inflammations. It is my purpose now to make some specific statements in regard to the above-named plasters.

More than three years ago I tried to convince a firm engaged in the manufacture of adhesive plasters of the practicability of spreading various emplastra upon strips of elastic webbing. This, however, was declared to be impossible, owing to the necessity of putting great tension upon the fabric during the process of coating it with the adhesive mixture. Shortly afterward, however, in a few experiments conducted in my office, I convinced myself of the feasibility of the above suggestion, and demonstrated the practical utility of elastic adhesive plaster upon some patients then under treatment. Later, Mr. H. R. Spencer, of 154th street, near Courtland Avenue, New York, succeeded in spreading some adhesive and medicated emplastra upon strips of elastic webbing, such as garters are made of, and which can be had in any well-regulated dry-goods store. This proved to be far superior to any made by myself.

The reason for selecting elastic webbing instead of sheet-rubber, such as is used for dental purposes, or the solid rubber bandage, is that it, like the ordinary cloths upon which plasters are spread, is porous and readily permits of the evaporation through its meshes of the insensible perspiration of that part of the body to which it is applied.

The following named emplastra are those which I have most frequently made use of, and are applicable in a great variety of cases:

Emplastrum plumbi (U. S.), on account of its non-irritating properties, and also from the fact that it may be applied to the skin for weeks, months, or even years, without the absorption of lead taking place, is most serviceable where it is desirable to exert *continuous elastic compression* for the pur-

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pose of mechanically aiding the absorption of inflammatory effusions, or preventing the occurrence of the same following surgical operations. It may also be used as a strapping applied to parts requiring support. Spread upon elastic webbing and carefully applied to œdematous, eczematous, and varicose limbs, it retains its place much better than the solid rubber bandage, and, owing to its elasticity, is far less irksome to the patient wearing it than any non-elastic strapping. I have made use of this as a retentive and corrective agent in the treatment of club-foot, and with excellent results, as well as in overcoming various other deformities due to faulty muscular action.

Emplastrum adhesivum (Emplastrum resinæ, U. S.) owes its great adhesiveness to the addition of resin to ordinary lead plaster. This plaster is useful when considerable tension is to be exerted upon a part, as its superior adhesiveness renders it less liable to slip when applied to the skin. I have used it with signal advantage in the treatment of fractures for overcoming muscular spasm. It is especially applicable in those cases of fracture in which a fragment, epiphysis, tubercle, or bony prominence is likely to be drawn out of place by muscular action. It can be advantageously used in the treatment of torticollis, in dislocations—especially those of the shoulder, and as a temporary dressing in drop-wrist, and in a diversified class of cases too numerous here to detail.

Emplastrum belladonnæ (U. S.), owing to its analgesic, antispasmodic, and absorbent properties, is preëminently useful in combating acute local inflammations. Spread upon elastic webbing, and applied about joints in cases of acute synovitis, or other acute articular, or periarticular inflammations, its beneficial effects are very much augmented, owing to the elastic circumrerential compression which is continuously exerted. I have also made noteworthy use of it in hydrocele and epididymitis.

Emplastrum aconiti (U. S.), locally applied, has a sedative effect upon the terminal nerve filaments, and will be found serviceable in dealing with acute and painful articular and periarticular inflammations.

Emplastrum ammoniaci cum hydrargyri (U. S.), is an old and deservedly well-known lymphatic stimulant. Spread upon elastic webbing its value is much increased, as an application to chronically inflamed joints. I might add, that its absorbent properties, enhanced by the mechanical effects of continuous elastic compression, are none the less apparent in

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the treatment of syphilitic nodes and chronic glandular enlargements.

The most magical effects, however, which I have yet obtained in the use of elastic medicated plasters, have been with the following, which was made for me and spread upon elastic webbing by Mr. F. Bagoe, pharmacist of this city, in accordance with a formula which I furnished him, viz.: Venice turpentine, six parts; extract of belladonna, two parts; extract of aconite, two parts; magnesia, sufficient quantity to make a plaster mass.

The therapeutic effects which I have obtained by the use of this elastic plaster, in the treatment of acute, articular, and periarticular inflammations, have been talismanic. The wonderful absorbent effects of turpentine, which I have for several years so frequently had occasion to observe, were what led me to incorporate it in an elastic plaster. I have no doubt but that other of the terebinthinates may be found equally serviceable.

The above enumerated emplastra may be spread upon strips of elastic webbing varying in width from three-eighths of an inch to an inch and a half or two inches, according to the necessities of the case. The amount of elastic compression which will be tolerated in a given case, will, as a rule, depend upon the amount of inflammatory effusion present; the greater the effusion and the more recently it has taken place, the more tolerant will be the patient to elastic compression, provided the parts below are previously covered with a firmly and smoothly applied roller bandage. The elastic bandages are most conveniently applied in the form of a continuous strip rolled up as is an ordinary bandage. To avoid unpleasant experiences, and to obtain the maximum amount of good in the shortest space of time, considerable skill and mechanical tact will be requisite in the application of bandages, elastic and non-elastic.

Prophylactic against Diphtheria, and Treatment of Scarlatina and Erysipelas, etc.—In the last *Transactions of the Medical Association of South Carolina*, Dr. F. Peyre Porcher, Professor of Materia Medica and Therapeutics in the Medical College of the State of South Carolina, Charleston, says: In the course of a review published in the *Charleston Medical Journal* many years since, and also in a letter to a medical gentleman in Philadelphia, written in 1879, which was copied in the *Medical Brief*, of St. Louis, Mo., I proposed a plan for preventing the attacks of this fatal disease [diphtheria].

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This was by measures to be used by those who were well, but who were exposed to its contagion. My ideas were based upon the fact that this disease (whether or not it depended upon the presence of a specific germ) at its inceptive stage was local, and generally had its seat in the fauces, which if acted on and modified by suitable agents, would not offer a nidus for its reception. If micro-organisms are the agents by which diphtheria is caused or propagated, then they will be less likely to effect a lodgment upon surfaces which are subjected to the repeated action of remedies which, whilst uninjurious, may also prove efficient in the destruction of such organisms, I also selected agents well known for their activity and value as tonics, depurants and antiseptics, and which would be adapted to the treatment of the disease should our efforts at prevention prove abortive. The prescription is as follows—the alcohol being a comparatively recent addition:

℞. Tincture of chloride of iron...2 to 3 drachms.
Chlorate of potash.....2 to 3 drachms.
Sulphate of quinine.....15 to 20 grains.
Hypophosphite of soda.....1 to 2 drachms.
Alcohol..... 1 ounce.
Water..... ..6 ounces.

M. S.—A teaspoon to a desertspoonful two or three times a day in a little water—to be used by those exposed to the disease. The size of the dose may vary with the age of the subject and the nature of the exposure.

I have directed and used this formula in many families here for years past, by whom it has always been kept, and others have employed it elsewhere by my advice; and though the testimony must always be negative, I have never known a case of diphtheria to occur where it was used. The experience of one physician, however, cannot be conclusive upon such a subject, and others must examine into the merits of a claim of such importance.

In the early part of the past year, in a communication, made at his request, to my friend, Dr. Thos. F. Wood, editor of the *North Carolina Medical Journal*, I suggested that an addition might be made to the above formula in the case of children much exposed to the danger of infection—when, for example, the disease already existed or had recently occurred in a household. This consisted in the addition to each dose of $\frac{1}{50}$th to $\frac{1}{75}$th of a grain of the bichloride of mercury; and it was based upon the special power of this agent

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in its action on micro-organisms—as an antiseptic and germicide.

Besides the earlier testimony of European observers, in the recent paper by Dr. Sternberg (*Amer. Jour. Med. Sciences*, April, 1883), entitled "Experiments to Determine the Germicide Value of Certain Therapeutic Agents," the highest rank is given to this agent as a germicide—iodine, in his opinion, being next in order; and he states as a confirmatory fact that they are now using corrosive sublimate in Vienna as a remedy for diphtheria. Prof. Pepper, of Philadelphia, following Dr. G. A. Linn's method, has reported the cure of a desperate case by corrosive sublimate, given in doses of $\frac{1}{32}$nd of a grain, combined with other agents. Dr. Jas. C. Wilson, of Philadelphia, in an article in the same issue of the *Amer. Journal*, recommends it as a disinfectant for the stools in enteric fever. These observations only confirm and strengthen the probable value of the suggestion I had long before made with regard to the use of this agent.

The employment with similar intent of salicylic acid, thymol, eucalyptus, the oils of gaultheria and mint, or the combination known as "Listerine," may prove useful; but I do not think that vegetable products will modify mucous membranes as powerfully as mineral.

In conclusion, I would add, that I have found the same formula serviceable likewise in the treatment of scarlet fever; and with the substitution of two or three drachms of sup. tartrate of potash in lieu of the hyposulphite of soda, it has proved in my hands extremely valuable in erysipelas, in ulcerative sore throat, in cellulitis, and diseases of the lymphatic system, where there is swelling and puffiness of the subcutaneous cellular tissues.

The Glycero-Borates of Calcium and Sodium for Hay Fever or Autumnal Catarrh.—Dr. George Bayles, of Orange, N. J., in a letter addressed by invitation to the Hay Fever Association, presents the following remarks·

"Within the past year I have had occasion and opportunity to extend the valuable experiments of Mr. Le Bon in the employment of his new antiseptics, viz.: the glycero-borates of calcium and sodium. The application of these agents in the treatment of this catarrhal disorder is, I suppose, original with myself, and defines the line of the extended observation to which I have just alluded. It may add something to the literature of the disease, the therapeutic value of the agents employed and the resources of a remedial nature at the disposal of the afflicted.

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In this communication I will not recite cases, but give in brief terms such facts as will illustrate what I believe to be fair inferences regarding these medicinal agents, and leave the subject to be proven or condemned by further investigation.

The glycero-borates of calcium and sodium are of easy combination. The formulæ are well known. I have used them in hay fever, and diseases having similar local manifestation with gratifying success. I use them applied, as nearly as possible, to the affected parts, *i. e.*, direct to the post-nasal passages, the throat and eyes, as a fluid or by spray, or in an undissolved state. The immediate effect is soothing, the later effect healing and tonic. I have seen very distressing catarrhal fluxes promptly checked, sneezing quickly allayed, respiration become unembarrassed, and general physical comfort secured. An attack will be practically abated in two days by the diligent use of either, but generally with more promptness by the calcic form. It never seems to fail wholly but some times takes longer to cure, especially if usedcarelessly or with insufficient thoroughness. As a method of relief I have the utmost confidence in both preparations.

These compounds are classed as antiseptics. Both of them seem to possess the important advantage of being very soluble, destitute of odor and free from all toxic action; when exposed to the air they both deliquesce with great rapidity, absorbing from the air an equivalent weight of moisture. Both alcohol and water dissolve twice their own weight of the solution.

The most effective in a therapeutic point of view appears to be the calcic salt, it is absolutely innocuous and can be applied in strong solution to so delicate an organ as the eye without bad results. What the disinfectant nature of the compounds may prove in their relation to hay fever I do not undertake to decide, whether acting in an antiseptic capacity or as purely restorative agents in the function of a medicinal palliative to inflamed surfaces, they nevertheless have proven their value in suppressing some of the hard features of this distressing disorder. They may prove to be the long sought *specific* remedies for the periodical pyretetic catarrhs, and if so, we have found a priceless treasure."

Ergot as a Prevention of the Aural Troubles Occasioned by Quinine and Salicylate of Soda.—In three cases of acute articular rheumatism, Schilling has observed that the prolonged

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administration of salicylate of soda in doses of ℈vss–ʒiiss a day, causes permanent aural trouble. The membrana tympani was thickened and of cloudy aspect. A fourth case, which in two successive days had taken single doses of grs. xxx of sulphate of quinine, became subject to roaring in the ears and deafness. This is not an infrequent effect of quinine or the salicylate administered in large doses, and Schilling proposes to administer ergot with these drugs in order to prevent vascular paralysis; for example he gives the following: Ergotine grs. xv, salicylate of soda ʒiiss, water ℥vj. M. S.—A large spoonful every hour. Of eighty-seven patients who have taken this prescription, three-fourths have had no aural symptoms, and the same was noticed in nine other patients who took quinine and ergotine in equal parts. This mixture will be equally preventive of the amblyopia which sometimes follows large doses of quinine.—*Progres Med.*—*Iowa State Med. Reporter*, August, 1883.

Ozone as Anæsthetic and Hypnotic.—Prof. Binz, of Bonn, has made a series of experiments upon the physiological effects of pure ozonized air. He did not prepare the ozone which he employed by chemical means, as ozone prepared in this way contains many impurities, but by electricity, using a tube made by Werner Siemens for the silent discharge. The tube was an inch in diameter and a foot long, and was operated with four Bunsen cells and an induction coil that would give a spark nearly an inch long when the battery was in good order.

The ozone tube was connected with a chloride of calcium cylinder charged with eight inches of coarsely powdered chloride of calcium between plugs of glass wool. The air to be ozonized had to pass through this tube, which filtered and dried it sufficiently; the former is of importance for the purity of the ozone, the latter for the quantity.

The ozone thus prepared, when conducted into water recently distilled over permanganate of potash and then made slightly alkaline, did not show a trace of nitrous or nitric acid. A second experiment gave the same result.

We cannot go into all the details of the precautions used in its inhalation and the apparatus employed. Experiments made upon the lower animals showed that an apparent sleeping state could be produced before the air passagee were irritated by it, and this was more distinctly noticed in men. The breathing before sleep began was quiet and full, the persons experimented upon said that it was easy and com-

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fortable, and the passage from the waking to the sleeping state was a feeling of the most agreeable indifference. The pulse never exhibited any perceptible change during the experiment, nor was there any alteration in the pupil of the eyes or the color of the face. If the quantity of ozone inhaled is too large, from the apparatus working too fast or the tube being too near the nostrils, it may excite violent coughing, nausea, and choking, but not the slightest sensation of local irritation in the chest is perceived.

In all observations hitherto made as to the effect of ozone on men, they have only described the irritating effect on the air passages resembling those of chlorine. The reason of this was that the ozone was not mixed with air in suitable proportions, and in most cases also to impurities of the ozone used. In the former respect Binz compares ozone to alcohol, which used in its concentrated form irritates the mucous membranes violently, destroys the epithelium, coagulates albumen, etc., but when very dilute scarcely exerts any perceptible influence on them.

Owing to the very transitory effect of ozone, it will never take the place of nitrous oxide for anæsthesia for surgical purposes. Binz himself does not lay much weight upon the practical importance of the ozone sleep, but hints that further experiments in this direction may lead to important results. *Pharm. Centrallhalle.*

[We copy the above from the *Scientific American*, of August 25th. The Editor of that journal adds, "Perhaps the ozone in mountain air increases its hypnotic, and hence invigorating effect. Cannot pure ozonized air be used for sleeplessness in such cases?" We call special attention to the extract above, because we have never thought sufficient recognition has been made of the experiments and observations recorded by Dr. Wm. B. Gray, of this city in the August number 1874, of the *Virginia Medical Monthly*. His experiments go far to show that oxygen may yet be utilized as an anæsthetic for surgical purposes.—EDITOR.]

Trichina Spiralis—Symptoms and Treatment in the Human Subject.—Dr. Chas. P. King, Newark, Ohio, in a communication to the *Cincinnati Lancet and Clinic* for Oct. 28th, 1882, states that Dr. Koch, of Berlin, has demonstrated that consumption originates from a parasite. This parasite is the *trichina spiralis* which is a microscopical entozoa. This was discovered in 1832. Prof. Owen, in 1835, gave its natural history. This parasite resembles a fine hair coiled upon it-

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self like a watch-spring. It is only visible to the naked eye when enclosed in its capsule. It appears as small white points when a section of muscle is examined.

Trichinæ are generally introduced in man's stomach, in its capsule, although they may possibly find their way there otherwise. Their calcareous shell is dissolved by the acid juices of the stomach, and the parasites, thus set free, rapidly acquire their growth and sexual power. Reproduction occurs within a week. The young swarm immediately commence their destructive work, by piercing the coats of the stomach and intestines. The parent swarm probably dies within two weeks, but it never leaves the alimentary canal until then.

The young trichinæ seek the fibre of the voluntary muscular fibre, through the intestinal coats, which process, of course, produce symptoms which closely resemble those of diarrhœa or dysentery. Bloody stools, with sometimes ulceration and even perforation of the bowels, result from the inflammation. The abdominal muscles are first attacked; but the trichinæ often soon find their way into the chest and neck; and, by degrees, reach the muscles of the back and extremities. One ounce of flesh may contain, within eight days, enough trichinæ to contain 3,000,000 young.

The writer next refers to the familiar results of the Hettstadt tragedy in 1865, reported in the *Brit. Med. Journal.* One of the courses at dinner to 103 person, was "sausage and vegetables." The sausage was prepared the day before. The day after the dinner several were attacked with intestinal pain and irritation and loss of appetite, but with fever and prostration. An epidemic of septic fever was feared. But the symptoms assumed a different type. Peritonitis, circumscribed pneumonia and paralysis of the abdominal and neck muscles set in. Every article of food used was examined. By this time, the trichinæ reached the muscles of the calves of the legs in some victims. The rest of the sausage was now *swarming* with trichinæ. Eighty-three of the cases died within a few weeks, and the remaining 20 recovered after a long and painful illness. Dr. Shaulter, of New York, reported, in 1860, the first genuine case of trichina in this country. In 1866, Dr. J. H. Wilson had 9 cases in one family, at Marion, Iowa, and 5 deaths. Numbers of cases have since been reported, from various sections.

A patient after eating trichinous ham, in a few days or a week generally has pain and swelling of the eyes, agony in the stomach and bowels, vomiting, diarrhœa and profuse

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perspiration. Afterward the limbs become rigid—the least movement causes the greatest torture. The greater the bowel irritation, the more favorable the prognosis as a rule, as by this process the parasites will probably be discharged through the intestines. But if the irritation be not very marked, time is allowed for the young trichinæ to penetrate the intestinal walls and enter the muscular tissue—from the end of the first to the end of the second week. This second stage is the most dangerous. The passage of the worms into the muscular tissue generally causes death by the end of the fourth week. But if by this time, death does not occur they become encysted, and then irritative symptoms begin to disappear, and if no untoward accident results, the muscular system becomes habituated, as it were, to the presence of the parasite; the patient recovers motion of his legs and then may consider himself out of danger.

There are no known specifics for the disease. As soon as the disease is suspected, *active purgatives*, if commenced in time may prove successful. But the disease may be prevented by never eating any kind of pork that has not been thoroughly cooked.

New Results from Old Remedies—Hydrargyrum cum Creta, and Digitalis Sweat.—Dr. J. M. Lazzell, of Fairmont, W. Va., in the "Report of the Committee on New Remedies, presented at the meeting of the Medical Society of West Virginia, held in Grafton, May 16–17, 1883, as published in the *Transactions* just issued, says:

"It has occurred on two different occasions, and been verified by two other reliable physicians, that *hydrargyrum cum creta*, under some circumstances, and long keeping, undergoes some kind of deterioration which renders it more or less poisonous, its action then resembling that of bi-chloride of mercury. It becomes granular, hardened, decidedly so between the finger and thumb. In this state it has been repeatedly given to children in small doses with uniformly the same results, to-wit, vomiting, purging, griping and prostration. I have never seen this mentioned by any author. What chemical or other changes take place I cannot say, but of the facts I am positive, and can give concurrent testimony.

Another result observed is called, for want of a better name, a "*digitalis sweat*". Tincture digitalis, long continued, produces a peculiar and remarkable kind of sweat over the whole body, resembling and representing the washerwoman's hands —the "washerwoman's skin." This is continuous and will

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remain several days after discontinuing the remedy. The skin is bathed in perspiration, and is shriveled and corrugated. I have never seen this result mentioned in books. This has occurred in several cases. Can any member recall a like result? I want more light".

Sodium Nitrite for Epilepsy.—At a meeting of the Royal Med. and Surg. Society, Dr. Ralfe claimed for Dr. Law, of Hastings, (*Brit. Med. Jour.*), the credit for first recommending nitrate of sodium in the treatment of epilepsy, and for assigning his theoretical reasons therefor in the *Practitioner* (June, 1882). Sodium nitrite resembles in its action amyl and nitro-glycerin—its advantage being that its effects, while slower, are more permanent. The dose should just escape producing physiological effect. The dose should be pure. Of seventeen cases thus treated three were unimproved, one was doubtful, four received slight benefit and nine were most decidedly improved. The author drew the following conclusions: 1. Those cases in which bromides are of marked service are not suitable for the nitrite. 2. Those cases in which the bromides do not agree well will be probably found to improve under the use of the nitrite. 3. When the bromides are losing their effect, or when there is bromism, sodium nitrite is used for a change. 4. There are a class of cases of minor convulsive attacks often occurring at night in which the nitrite is decidedly useful.—*Weekly Med. Rev.*, April 28, 1883.

Examine your Patient before Prescribing.—Scene: Office of a pompous doctor who knows it all. Enter a tired man, who drops into a seat, and says that he wants treatment. The doctor puts on his eyeglasses, looks at his tongue, feels his pulse, sounds his chest, and then draws up to his full height, and says: "Same old story, my friend. Men can't live without fresh air. No use trying it. I could make myself a corpse, like you are doing by degrees, if I sat down in my office and didn't stir. You must have fresh air; you must take long walks, and brace up by staying out doors. Now I could make a drug store out of you, and you would think I was a smart man, but my advice to you is to walk, walk, walk."

Patient.—But, Doctor———

Doctor.—That's right. Argue the question. That's my reward. Of course you know all about my business. Now

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will you take my advice? Take long walks every day, several times a day, and get your blood in circulation.

Patient.—I do walk, Doctor I——

Doctor.—Of course you do walk. I know that; but walk more. Walk ten times as much as you do now. That will cure you.

Patient.—But my business?

Doctor.—Of course, your business prevents it. Change your business, so that you will have to walk more. What is your business?

Patient.—I am a letter carrier.

Doctor (paralyzed)—My friend, permit me to once more examine your tongue.

Book Notices, &c.

Treatise on Insanity in its Medical Relations. By WM. A. HAMMOND, M. D., Surgeon-General U. S. Army (Retired List); Professor of Diseases of the Mind and Nervous System in New York Post-Graduate Medical School, etc. New York: D. Appleton & Co. 1883. 8vo. Pp. 767. (For Sale by West, Johnston & Co., Richmond, Va.)

Dr. Hammond is a remarkable man. Especially has he contributed much to the store of knowledge regarding the nervous system, and his fame, in this respect, covers the world. Now he begins a career in the broad field of purely psycological science, confining himself to that branch which treats of insanity. Although he confesses not to have had the opportunity for studying as *many* cases as some superintendents of lunatic asylums, he rightly claims, in the Preface, "that a single case, thoroughly studied, is worth more as a lesson than a hundred that are simply looked at, and often from afar off. The medical student who dissects one human body is likely to learn more of anatomy than the janitor who sees hundreds of corpses brought to the dissecting room." Beyond the fact that the author has been a teacher on the subject of mental diseases for seventeen years—the first professorship, even, of that branch of medical science in this country having been held by him—the numerous foot-note references to domestic and foreign writings which are contained in his book show conclusively that he is also familiar with the literature of insanity.

Dr. Hammond starts out with the idea that the brain is the organ for the elimination of mind—much as the kidney

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is the organ for the elimination of urine. It is not necessary for the kidneys to be diseased to eliminate certain of the effete or foreign or adventitious material that may accidentally or intentionally gain admittance into the blood. After ingestion of some articles of diet, for instance, albumen is soon found in the urine; yet albumen, according to the authority of physiologists generally, could scarcely be classed as among the normal constituents of urine. The kidneys themselves may, under such circumstances, be perfectly healthy, but there is a momentary perversion of function—of excreting something more than really belongs to their normal activity. Let the kidneys, however, be diseased, and of necessity, according to the nature of that disease, it will become demonstrable by the chemist or microscopist, who may, at the same time, be an intelligent physician. Sometimes abnormal conditions of other parts than the immediate structure of the kidneys, by a too hasty conclusion from the exact nature of their excretion, may make the impression upon the uninitiated that these organs themselves are diseased, when, in reality, they are not. There are many cases of what might be called "reflex insanity," as in cases of of insanity due to ovaralgia, hepatic abscess, etc., where the mind is secondarily involved. And, to carry the point further, "reflex insanity" may occur from too impressive an idea upon the "mind," as in cases of fright, or where hallucinations or delusions are constantly nursed so as to become delusions. The hallucination or illusion might have been dismissed by a proper exercise of the mind as successfully as a renal calculus, after it passes into the ureter, can usually be urged to pass into the bladder before it dams the urine back into the pelvis of the kidney and hold it there, which of course may result in structural disease of the affected organ. If we properly understand the line of argument projected by Dr. Hammond, we think the crude comparisons we have indulged in suggest his views in general, and, if so, we agree with him.

We must not, however, let ourselves be led away from our path into discussions that we plainly see may be indulged in at almost every step we have taken. We recognize in the volume before us a work of rare excellence. It is the result of long study by an eminent man, worthy of the name he has made for himself. In his descriptive talent, Dr. Hammond is inimitable. His records make the reader feel that he was attending a clinical lecture, with the patient before him. His distinctions are finely drawn. But, we fear,

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that many readers will read some of his chapters without being able to recognize the difference of the class of cases he wishes to portray as distinctive. His definitions will be regarded by the *general* reader as too technical; and some of the usefulness of the book will be lost sight of because of reference to the last chapter of all questions relating to treatment. There is not enough of discrimination as to the class of cases for which the prescriptions in the last chapter are intended for the general practitioner. We are reminded by this chapter of the result of a good, honest, faithful and advisory old practitioner, who died some years ago in about his eighty-fifth year, who advised the writer, when about to commit a patient to an asylum because of mania due to ovarian trouble:—"My boy," he said, "purge, purge freely. Use calomel and jalap. I never lost a case in my life, nor did I ever have to send a patient to an asylum. Take your case in time. A family doctor should visit his families as much as a pastor visits his flock—not to find them sick but keep them well."

Dr. Hammond's work ought to be read by all practitioners, because of the amount of collected information it contains. It is an authoritative guide, in the line of diagnosis. The remedies named in the chapter on treatment are not specifics, but each one is intended as a suggestion, and is worthy of consideration for the conditions named. To the specialist, we conceive that this work will be of incalculable service, in view of the special literature on the subject of insanity at this day. Most of the other special monographs seem intended to present only the hobbies of individual authors. This work is really a *treatise*, made by an earnest student who offers no special hobby that is intended for any one to ride—except to learn what is known.

Observations on Lithotomy, Lithotrity and the Early Detection of Stone in the Bladder. By REGINALD HARRISON, F. R. G. S., Surgeon to the Liverpool Royal Infirmary, etc. London: J. & A. Churchill. 1883. 8vo. Pp. 71. (By mail from Publishers.)

It is a compliment that even the "Nestor of American Surgery" must appreciate to find this book dedicated "To my esteemed friend, Samuel D. Gross, M. D., LL.D., D. C. L., Oxon.," etc. Full recognition is also made of Bigelow's operation, which has revolutionized the practice of surgeons in regard to the removal of stone in the bladder. In short, full credits are given to American authors, and chapters are finished with well-drawn conclusions of practi-

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cal value to the every-day doctor. Dr. Harrison closes his book with a chapter describing a new method of tapping the bladder from the perineum, through the hypertrophied prostate. It is, in brief, to push the trocar through the enlarged prostate, which is the condition of this gland usually met with in old men. This book is worth a great deal more than its unpretentious size might suggest to the "fashionable few."

Handbook of the Diagnosis and Treatment of Diseases of the Throat, Nose and Naso-Pharynx. By CARL SEILER, M. D., Lecturer on Laryngoscopy, Univ. Penn.; Chief of Throat Dispensary, University Hospital, etc. Second Edition. Thoroughly Revised and Greatly Enlarged. With 77 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1883. 12mo. Pp. 295.

We do not think we err in saying that this book is one of practical value to every doctor. Of course, every "specialist" should have it in his library. There may be a faulty arrangement of the chapters; but this criticism amounts to very little since the work is small enough to be *thoroughly* read, certainly within a week. As a new feature, the Author claims for this second edition a "case record-sheet." Every doctor, who is a student of his own cases, needs a "form-book" of his own. Such things as Dr. Seiler suggests are good as suggestions; but we do not think we could depend upon them. Our opinion must be stated summarily. If "chapter xvi," containing tables of symptoms of the diseases of the larynx and naso-pharynx, were placed at the beginning, instead of at the end of the section devoted to laryngeal troubles, the reader would have a better guide to "learn what he has to learn."

Diseases of Women. By HEINRICH FRITSCH, M. D., Professor of Gynæcology and Obstetrics at University of Halle. Translated by ISIDOR FURST. With 150 Wood Engravings. New York: Wm. Wood & Co. 1883. 8vo. Pp. 355. (For sale by West, Johnston & Co., Richmond, Va.)

This "Manual for Physicians and Students" is issued as one of Wood's Library of Standard Medical Authors," which has heretofore been so popular. But of late, we have heard much complaint against the series because of the manner of publication. In the first place, there are many specialists who wish only a certain class of works, and feel that they are wasting money to subscribe to the whole annual series to get only one or two they may desire. Hence such parties

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either do not get the book wanted at all, or else borrow it from the library of some annual subscriber. Sometimes an annual subscriber loses one of his set. We would suggest that some arrangement be made by which one or more of the books may be bought, to supply the need of the one party or to repair the loss of the other. In the next place, complaint is made that after the issue of one volume of work by the same author on the same subject, the issue of the second or subsequent volume is sometimes long delayed. The annoyance to subscribers who are thus disappointed is great, and tends to lessen the true usefulness and popularity of the "Library."

Leaving such objections as to the policy of the Publishers aside, it cannot be denied that their selections of works for their "Library" are usually made with care and an eye to the practical interests of the profession. None of the series published thus far during 1883 gives us a better opportunity to make this remark than the special work now under notice. Without preface or introduction, Chapter I begins with the anatomy of the external genitals, and wherever it would seem to be beneficial, wood-cut illustrations are introduced. Chapter II gives the physiological facts, without effort to discuss purely theoretical considerations. Chapter III takes up general diagnosis, and the author progresses systematically until he reaches Chapter VI, which begins with diseases of the vulva, and all the subsequent chapters are devoted to special diseases. Scarcely a sentence is devoted to Battey's operation, which is spoken of as "castration;" but the author forgets to describe how to do it. All in all, however, for the general practitioner, we regard this as an excellent guide-book.

Treatise on Therapeutics, Comprising Materia Medica and Toxicology. By H. C. WOOD, M. D., Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System in the University of Pennsylvania, etc. Fifth Edition, Revised and Enlarged. Philadelphia: J. B. Lippincott & Co. 1883. Cloth. 8vo. Pp. 740. (For sale by West, Johnston & Co., Richmond.)

The popularity of this work really surprises us, notwithstanding our own expressed appreciation of it, as to former editions. This is an improvement still; but evidently the haste with which it had to be prepared has not allowed the author to make it perfect. In this transition stage of the U. S. Pharmacopœial directions, one who writes a book ought to state to which edition he refers. Many a doctor

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has yet only the older editions of either the Pharmacopœia, or of either the National or U. S. Dispensatory. There are dangers attending any sudden or radical change of circumstances, and authors, who have conservative views, ought to consider them. For four or five years, at least, after the adoption of the present chemical nomenclature, authors, in that department of science, were careful to state both the old and the new nomenclature or symbols. By a unanimity that was remarkable, chemists generally accepted the "new departure" as the best; but such is not the case in regard to the "New Pharmacopœia." Dr. Squibb, for instance, obstinately holds out in regard to certain preparations; and his influence is about one-fourth of all that decided to change. Unless we fully understand each other as physician and apothecary, sooner or later, there will be more occasion to consult what has been written by Dr. Wood on "Toxicology" than what has been said on "Therapeutics and Materia Medica."

We do not fear that our friends who have seen our former notices of this book will misunderstand the criticism we have made about the present edition. The *substance* is as valuable in the fifth as in the fourth edition. In fact, some changes and annotations—perhaps additions—have been made which make the book, as at present issued, about four pages larger than the former edition. We, therefore, scarcely see the need of those who own the issue of 1882 to lay that aside in order to purchase that of 1883. Only consult your druggist, and if he is still following the former Pharmacopœia, as many are, follow the directions given in the fourth edition of Wood's Therapeutics; if he is following the U. S. Pharmacopœia of this day, be sure to consult it before prescribing the dose under the recommendations of the *fifth* edition.

Practical Treatise on Impotence, Sterility and Allied Disorders of the Male Sexual Organs. By SAMUEL W. GROSS, A. M., M. D., Professor of Principles of Surgery and Clinical Surgery, Jefferson Medical College, etc. Second Edition. Thoroughly Revised. With 16 Illustrations. Philadelphia: Henry C. Lea's Son & Co. 1883. 8vo. Pp. 176. (For sale by Thomas J. Starke & Sons, Richmond.)

So favorably was the first edition received, that it was out of print for some months before the present revised edition could be gotten ready. In further evidence of its popularity, it has been translated into the Russian language. The value of this brochure may be better understood when some of practical teachings are stated. For instance, the Doctor

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quite conclusively proves that sterility is due to the husband instead of the wife in the proportion of about one to six. When the sterility is due to the man, why torture the woman with unnecessary examinations, painful operations, etc.? Impotence and spermatorrhœa, according to the author's observations, "usually depend upon reflex disturbances of the genito-spinal centres, and are almost invariably induced or maintained by appreciable lesions of the prostatic portion of the urethra." Dr. Gross has prepared, in this little volume, a work of great practical value to every physician; for scarcely does a day pass around but that "one more unfortunate" does not wish a "private consultation" about his case, involving one of the three conditions just referred to. It is a book that not only ought, because of its merit, become *the* standard on the subjects treated of, but will become so popular, we doubt not, as to call upon the author to prepare many other editions.

Treatise on Diseases of the Eye. By SOELBERG WELLS, F. R. C. S., Doctor of Medicine of the University of Edinburgh; Professor of Ophthalmology in King's College, London, etc. Fourth American, from Third English Edition, with Copious Additions, by CHARLES STEDMAN BULL, A. M., M. D., Lecturer on Ophthalmology in Bellevue Hospital Medical College, etc. Illustrated with 257 Engravings on Wood, and six Colored Plates, together with Selections from the Test-Types of Prof. E. Jaeger and Prof. H. Snellen. Philadelphia: Henry C. Lea's Son & Co. 1883. Half Russia. 8vo. Pp. 846. (For sale by West, Johnston & Co., Richmond.)

This handsomely issued work is presented by an author of the highest eminence in his specialty. Indeed, it is the text-book in most of the colleges where medicine is taught. It is the "study-book" for the general practitioner, and the constant "reference-book" of the ophthalmic specialist. Dr. Wells gives foot-note references which are not only right, as a matter of fact, but complimentary to the gentlemen who made the suggestions which he borrows. The American Editor, unfortunately, in his effort to advance the cause of ophthalmology, fails to remember the maxim stated in "Holy Writ," "render unto Cæsar the things that are Cæsar's." Of course Dr. Bull does not claim all that he adds as original to himself. But while he is made prominent as the American Editor, he ought not to fail to record the names of specialists of America who have done much to advance the science of ophthalmology—such as Jeffries, of Boston, Noyes, of New York, several of his own city, Chisolm and others of

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Baltimore, White, of Richmond, Calhoun, of Atlanta, etc. We have no prejudice in this matter other than to promote the general interests of the American profession.

Leaving this sense of desire for national promotion aside, we find that several additions have been made to the original text by the American Editor. He has added his own "method of treating depressed scars of the face;" the chapter on "purulent conjunctivitis of new-born children," as also the one on "membranous conjunctivitis," are entirely new. Explanation is made why no mention is made to the use of jequirity bean for pannus and trachoma. New views are advanced regarding the "comparative physiological and therapeutical value of various mydriatics." Many other points, adding to the true value of Well's work, have been introduced. But all such improvements have been made without increasing the number of pages—simply by the use of more condensed type than was used in former editions.

The slight criticism we have made as to the peculiarity of the editor in not carrying out the full idea of the author, in not making proper credit to each writer who has lent him so much of information, shows that he is not truly acquainted with medical journalism. Nevertheless, his work has been well done, in general, and it makes the English edition less of service to American physicians.

The Microscope and its Revelations. By WM. B. CARPENTER, C. B., M. D., LL. D., etc. Sixth Edition. Illustrated by 26 Plates and 500 Wood Engravings. New York: Wm. Wood & Co. 1883. 8vo. Vol. I, Pp. 388; Vol. II, Pp. 354. (By mail from Publishers.)

These two volumes are the April and May numbers, 1883, of Wood's Library. This work has been issued, as it should have been, in consecutive numbers. The rapidly growing importance attached to the microscope in medical science has made it proper for the profession to have something of a complete treatise on the subject, and these volumes as perfectly fill the want as any work that we know of. The first six chapters—about 220 pages—are taken up with descriptions of the microscope, its accessory apparatus, manner of operating it, methods of preparation of objects for the slides, etc. Chapter vii and the remainder of Vol. I describe the forms of vegetable life, which cause disease or are found in diseased structures or excretions. The first 300 pages of Vol. II reviews the microscopic forms of animal life Chapter xxi shows the application of the microscope to geological investigations. Chapter xxii gives the principles of micro-

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scopical investigation of the inorganic or mineral kingdom, and the application of polarization principles. An appendix takes up the odds and ends not discussed in the text, such as numerical aperture and angular aperture, and some new forms of microscopical apparatus. The numerous wood cuts and plates add greatly to the understanding of the text. A copious index is also added.

Gout in its Protean Aspects. By J. MILNER FOTHERGILL, M. D., R. C. P., Lond., Physician to the City of London Hospital, etc. Detroit, Mich.: George S. Davis. 1883. Cloth. 12mo. Pp. 300. (From Publisher.)

The popularity of the publications by Dr. Fothergill is not remarkable when the student has read any one of his several works. He writes with a facile pen, describing graphically what he wishes to describe, and in his conclusions he rids himself of personal bias and seeks to be practical. The small volume before us is an illustration of these assertions. His writings rank with those of the most eminent authorities. Take, for instance, the chapter on Diagnosis of Gout. It covers sixty-five pages, and is especially devoted to the finding out of the more obscure manifestations of gout that hinder the cure of other simpler or plainer forms of disease with which it may be a complication. It furnishes just those suggestions to the practitioner which he most needs in rebellious cases. The chapter on Treatment likewise develops the essential principles which should guide the physician in the management of this disease—whether it presents itself as an uncomplicated or a complicated affection. Rheumatic gout and chronic rheumatism receive the attention of separate chapters. All in all, it is a book of great value to the general practitioner. An index materially assists in making quick references to the different topics described or discussed.

Transactions of the College of Physicians of Philadelphia. Third Series. Vol. VI. Philadelphia. 1883. 8vo. Pp. 451. *President*—ALFRED STILLÉ, M. D., LL. D; *Secretary*—RICHARD A. CLEEMANN, M. D.

Several times during the year, we have favored our readers with reports of the proceedings of this highly scientific and representative medical society. The present volume contains some thirty different articles of value, by such authors as Drs. Cleemann, W. F. Atlee, Harlan, Keating, Hutchin-

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son, Roberts, Eskridge, Hopkins, Meigs, Keen, Mears, Mills, Mitchell, Goodell, Cohen, Allen, etc., with stenographic reports of the discussions which followed the reading of almost every paper. Such a volume is to be prized as among the most valuable in one's library. It is handsomely issued as to press-work and binding, and the Secretary deserves great credit for the faithfulness with which he has evidently done even more than was required of him.

Physiological Cruelty, or Fact v. Fancy. By PHILANTHROPOS. New York: John Wiley & Sons. 1883. Cloth, 8 vo. Pp. 156. (From Publishers.)

We were never an approver of an anonymously edited book. However valuable the "facts *v.* fancy" it contains, something of interest is imparted by a knowledge of the author's *name*, at least. When a stranger enters a church door, his first question of the usher generally is, who is the preacher? and if he cannot tell who the preacher is, the stranger is apt to go over to next nearest church, where the preacher's name at least is known. As to the merits of the book before us, we must say that it fairly presents the question of vivisection from a physiological standpoint, and of course concludes that, with proper restrictions as to avoidable appearance of cruelty, it is an essential practice in order to gain scientific information. It is as important to inquire into the causes and effects of pain in different regions as to the effects of remedies which are intended to relieve suffering. This book is good reading for the educated classes of the laity as well as to furnish facts and arguments to the experimental physiologist, etc., who may have occasion to defend his course before a community that decries such means of investigation. Strange to say, the short sightedness or fanaticism of many leads them to discuss the propriety of scientific vivisection under the head of "Cruelty to Animals."

Essentials of Pathology. By D. TODD GILLIAM, M. D., Professor of Physiology, Starling Medical College; formerly Professor of General Pathology, Columbus Medical College, etc. Philadelphia: P. Blakiston, Son & Co. 1883. Cloth, 12 mo. Pp. 296. Price, $2. (For sale by Messrs. West, Johnston & Co., Richmond.)

This manual is intended especially for the student and physician—not for the specialist. It presents the subject in a pleasing and practical light, and will be found serviceable

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to those in search of the main facts connected with pathology in general. It is impossible to give more of a general view of this book in the brief space at our command. Inflammatory growths and results are considered; the pathology of most of the "essential diseases" that are met with in ordinary practice is given, etc. A full index is added, which enables the reader to refer promptly to the pathology of many such diseases. It is a valuable work to the physician who seeks scientific facts in medicine as an aid to intelligent practice.

Transactions of the Medical Society of North Carolina. 1882. 8vo. Pp. 193-xlvi. Dr. L. JULIEN PICOT, Littleton, *Secretary.*

Dr. H. W. Lilly, of Fayetteville, presented the valuable "Report of the Section on Pathology and Microscopy." The Report on "Obstetrics and Gynæcology," by Dr. A. W. Knox, of Raleigh, takes up antiseptic midwifery, the relation between the time for the predilection for impregnation and sterility, the origin of the carunculæ myrtiformes, nausea and vomiting of pregnancy, Martin's rubber bandage as a utero-abdominal supporter, viburnum prunifolium in threatened abortion, expression of the placenta, version during labor by external manœuvres, transmission of syphilis by pregnant mother, chloral in labor, nitrous oxide as obstetric anæsthetic, ice for mammary abscess, ovariotomy for puerperal mania, electricity in extra-uterine pregnancy, large dose of morphia in puerperal eclampsia, new treatment of placenta prævia, genu-pectoral position in mal-presentations of the fœtus, tying the umbilical cord, Tarnier's axis-traction forceps, prevention of ophthalmia neonatorum, hot water intections into the uterus for post partum hæmorrhage, rupture of uterus successfully treated by drainage, Torro's operation, Müller's operation, laparo-elytrotomy, Listerism in gynæcology, proper field for Battey's operation, Listerism in ovariotomy, Freund's total extirpation of uterus, removal of uterine appendages for arrest of uterine hæmorrhage, curability of uterine displacements, Esmarch's bandage for removal of large fibroids by gastrotomy, removal of uterine fibroids by Thomas' spoon-saw, two important glands in female urethra, diagnosis of ovarian tumors, genu-pectoral position for retro-displacements, Kibbe's cot for fever after ovariotomy, tupelo tents, and nozzle for vaginal syringe with reverse current. We copy this detail of heading of subjects considered in this report of 47 pages as a model of excellence and

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to show what energy and tact ought to do in every Society. Such resumés are invaluable. Dr. R. L. Payne, Jr., of Lexington, gives a most important clinical report illustrating some of the complications of organic stricture of the male urethra. Dr. G. G. Thomas, of Wilmington, has a fine report on progress in materia medica and therapeutics. Dr. R. F. Lewis, of Lumberton, reports a remarkable case in which the right arm was forcibly severed from the body at the shoulder joint, with recovery. Dr. A. W. Knox' public address was on vaccination. The President's address, by Dr. Thos. F. Wood, of Wilmington, is full of history and valuable suggestions. In brief, this is an *excellent volume.*

Transactions of the Medical Association of Georgia. 1881. 8vo. Pp. 316. Dr. A. SIBLEY CAMPBELL, Augusta, Ga., *Secretary.*

This neatly issued *Transactions* is one of unusual interest. In addition to the good suggestions of the retiring President, Dr. J. C. Le Hardy, of Savannah, as to improvements in the organization; the instructive paper by Dr. R. J. Nunn, of Savannah, on "Female Diseases, the Result of Errors in Habit and Hygiene during Childhood and Puberty, with Remarks on the Treatment of Rachialgia with Igni-Puncture;" Dr. Thos. R. Wrights (of Augusta) "Three Cases of Compound Comminuted Fracture of the Leg—Recovery without Suppuration;" "Case of Cut Throat" by Dr. Thos. H. Kenan, of Milledgeville; the "Uses of Fluid Extract of Ergot in Gonorrhœa," etc, by Dr. J. G. Hopkins, of Thomasville; "Wound Penetrating Cavity of Abdomen with Visceral Protrusion, and Wound of Duodenum," by Dr. W. H. Philpot, of Talbotton; "Gunshot Wound of the Abdomen—Fæcal Fistula—Spontaneous Closure—Recovery," by Dr. A. Sibley Campbell; Report on "Eye Surgery," by Dr. Chas. W. Hickman, of Augusta; "Miscarriage followed by Labor at Full Term," by Dr. S. B. Hawkins, of Americus; "Reports of Surgical Cases, and Discussion of Quinine and Tar Water as Antiseptic, etc.," by Dr. De Saussure Ford, of Augusta; "Report of the Section on Gynæcology," by Dr. S. H. Stout, of Chattanooga, Tenn.; "Nævus—Report of Cases," by Dr. W. F. Westmoreland, of Atlanta—after all these papers, which are both interesting and instructive, there is the "Necrology." In it, we find a full memoir of Crawford W. Long—the Discoverer of Modern Surgical Anæsthesia. "Had the volume contained nothing else, it would have been of great value on account of this record, which in time to come will be re-ex-

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amined, and tributes more lasting than eulogies will come from every part of the world to give permanent importance to this great benefactor of the human race. His biographer for these *Transactions* was the capable Dr. H. H. Carlton, of Athens, Ga.

Manuel des Injections Sous-Cutanees. Par BOURNEVILLE et BRICON. Paris: Librairie du *Progres Medical.* 1883. 32mo. Pp. 210. Paper. Price 3 francs. (From Authors.)

This "Manual on Hypodermic Injections" is the most interesting and instructive one on the subject that we have seen; and the number of agents mentioned as used for injections is the largest we know of in one volume. To enable one to make ready reference, the articles used are named alphabetically, and a statement of the diseases in which the agents are especially useful hypodermically is made, with doses, modes of preparing solutions, etc. A full review of the literature of the subject is given, together with the results of the latest recommendations of authors, besides many original suggestions. This little book should be in the hands of every practitioner of medicine, for no doctor would now be considered as equipped and ready for work who has not his hypodermic syringe. There is no manual on the subject the equal of this in value for its practical teachings. M. Bourneville is a favorite authority in this country and M. Bricon has a reputation scarcely second to that of his associate editor of this monograph.

Compend of Visceral Anatomy. By SAMUEL O. L. POTTER, M. A., M. D., Author of "Compend of Human Anatomy," etc. With 41 Illustrations. Philadelphia: P. Blakiston, Son & Co. 1883. Cloth. 12mo. Pp. 101. Price, $1.00. (From Publishers.)

This is No. 8 of the "Quiz-Compends," being issued by the old, reliable house, Messrs. P. Blakiston, Son & Co., intended for, and "especially adapted to the use of medical students." In its compilation, it is *chiefly* based on Gray's Anatomy, though Quain and other recognized authorities are time and again consulted. This book is a continuation of the series of "Questions on Human Anatomy" being edited by the same author. It is useful especially to the student who is preparing for examinations, or for him who is in search of those things which are most essential in practice.

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PAMPHLETS, REPRINTS, ETC., RECEIVED for which we have no room for fuller notice, etc.; but most of which can be obtained by enclosing a letter stamp for pamphlet to the respective authors named.

A Hitherto Undescribed Malformation of the Naso-Pharynx. By JOHN N. MCKENZIE, M. D., Baltimore, Md. 8vo. Pp. 4.

Nasal Cough and the Existence of a Sensitive Reflex Area in the Nose. (By same.) From *Amer. Jour. Med. Sci.*, July, 1883. 8vo. Pp. 11.

Some of the Simple Methods of Performing Hystero-Trachelorrhaphy. By O. E. HERRICK, M. D., Grand Rapids, Mich. 8v. Pp. 8. (From *Obstet. Gaz.*)

Continuous Inhalation of Vapor of Slacking Lime in the Treatment of Membranous Laryngitis. By EUGENE F. CORDELL, M. D., Baltimore, M. D. (From *Md. Med. Jour.*, Sept. 15, 1882.) 8v. Pp. 4.

Extensive Ravages from Lupus, with Subsequent Cicatrization, leaving but One Small Hole in the Face which Represents both Mouth and Nose, and with Complete Closure of the Anterior Nasal Orifices. By J. J. CHISOLM, M. D., Baltimore, Md. (From *Arch. Ophth.*, Vol. IX, No. 2.) 8vo. Pp. 5.

Color-Names, Color-Blindness, and the Education of the Color-Sense in Our Schools. By B. JOY JEFFRIES, A. M., M. D., Boston. (From *Education*, March, 1882.) 8vo. Pp. 11.

Inebriety a Disease. By THEODORE L. MASON, M. D., Brooklyn, N. Y. 8vo. Pp. 28.

Address of G. B. THORNTON, M. D., President Medical Society State of Tennessee. 8vo. Pp. 11.

New England Family. By NATHAN ALLEN, M. D., Lowell, Mass. (From *New Englander*, March, 1882.)

First Biennial Report Michigan Free Eye and Ear Infirmary. 1882. 8vo. Pp. 28. Dr. J. C. LUNDY, Detroit, Surgeon.

Fifth Annual Report Presbyterian Eye and Ear Charity Hospital, Baltimore, Md. 1883. 8vo. Pp. 40. Dr. J. J. CHISOLM, Surgeon.

Class Work of Pupils of Illinois Asylum for Feeble-Minded Children. 1882. 8vo. Pp. 11. Dr. C. T. WILBUR, Lincoln, Ill., Superintendent.

Fourteenth Annual Report Inebriates' Home, Fort Hamilton, N. Y. 1881. 8vo. Pp. 27. Dr. LEWIS D. MASON, Consulting Physician.

Committing a Nuisance.—"You are a nuisance, I'll commit you," said an offended judge to a noisy person in court. "You have no right to commit a nuisance," said the wit.

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Editorial.

Headings.—At the request of a number of our subscribers, we return to our former practice of placing distinctive type headings and paragraphs to our editorial notes. We ourselves like the plan, as it easily enables the eye to catch the title of the subject to be referred to or to be discussed.

The Medical Society of Virginia will convene its fourteenth annual session at Rockbridge Alum Springs, Va., Tuesday night, September 4th, 1883. The Managers of this celebrated resort, who so highly honor the Society by their generous favor of not making any hotel charge for members and delegates in attendance, will long be remembered by the profession who are about to enjoy their bountiful hospitality. Of course, usual hotel charges will be made for the wives or other members of the families of the doctors who may visit the Springs. We are glad to state that some distinguished gentlemen of other State Societies will attend as delegates, and each one, so far as we have heard, has promised to take an active part in the scientific deliberations of the body.—either by the contribution of papers or by participation in discussions that may arise. We are also gratified to believe that there will be an unusually large attendance of the Fellows of the Society, as well as a large addition to the membership of the Society. The profession can accomplish nothing without organization. Each citizen looks upon his own family physician pretty much as if he were the only physician to be recognized, and oftentimes that practitioner feels embarrassed in saying anything, because he fears that he may not be voicing the opinion of other professional brethren. Such an one gains self-confidence by attending the meetings of the Society, where he can hear the expressions of the representative gentlemen composing the Profession of Virginia, which oftentimes will furnish suggestions by which he may fortify his own opinion.

But beyond such considerations which relate to the external features of the profession, there is a greater element of personal benefit that results from a proper organization of the profession. Many *valuable* papers have been contributed to the cause of science because of such organizations. Take up almost any journal of medicine and look at the foot-notes of the title pages of the articles there contributed. Quite generally it is stated that the paper was read before some Society—either

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local, State or National. Most probably such papers would have never been prepared had there not been a Society before which to present them. After they are written, commented on and commended by friends of the authors, there arises a natural pleasure in putting them in type. By their publication if true original merit is in them, some reader or readers recognize it, and popularize the idea, and the suggestion, after awhile, becomes common practice —yielding benefits untold to suffering humanity.

Several times we have heard or seen the plan of organization of the Medical Society of Virginia commented on. There are numerous reasons why such a Society should be neither a *delegated* body or a *local* establishment. We will only take the surface views of these propositions for the present, trusting that discussion by "synoptic briefs" may be of interest to subscribers in other States, who are members of the Medical Societies of their respective Commonwealths.

First. State Societies should not be *delegated* because there are too few doctors in any State of the Union that can attend any one meeting. Take a State of, say, 3,000 recognized practitioners. It is quite safe to calculate the attendance at about one to ten. So that, with the best protective State laws that can be secured by legislation, only about 300 would be in attendance. Family afflictions, business engagements, specially important cases, etc., will always detain some who regret their own absence from attending. Others, from personal idiosyncrasies, take no more interest in medical societies than they do in church worship. Others, still, who want to go, cannot attend for want of means.

Secondly. In the election of delegates from any local body to a general assemblage, there are frequently local contentions which are unfortunate and always embarrassing. Human nature is so composed that there is something of jealousy, even in the apparently meekest person; and by an unhappy distribution of this element of human nature, it seems to have fallen especially upon a larger proportion of the medical profession than upon any other class of people. Preachers quarrel sometimes in print, but they afterwards commune together. Lawyers blaze away at each other; but as soon as court has adjourned, one or the other says, "Let's take a drink." Editors write coolly and deliberately—or ought to do so—apparently without hearing a statement, yet all the time keeping what they hear of importance in mind; but when they put to press what they have written, they recognize the responsibility that may fall upon them to bear

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or suffer. But *doctors* are excessively unfortunate; they have no one save their individual patients to hear them, and these patients become likewise selfish until they, too, almost forget that society has other demands than continuous bickerings, backbitings, inuendoes, etc. Under such circumstances the election of *delegates* to a State Society has its grave misfortunes.

Thirdly. State Medical Societies should not be delegated bodies because they are not simply legislative bodies, nor should they be composed of office- or honor-seekers. In science, true merit is the only standard for permanent recognition. But when *delegates* attend such a body, there is often something of purely local attachment or personal fondness that leads him to seek combinations.

Fourthly. Medical Societies are scientific bodies, and the *delegate*-elect, because of his personal popularity oftentimes, not the information that the most reticent can impart. Loquacity is not usually intelligence, nor is the blusterer generally to be counted on as the brave man. The humblest in social position may rank among the highest in professional worth; and by the system of delegations, that worth or excellence may be kept away from the very place where it may be of the greatest benefit. Let *every* man be allowed to get in position where he can do all the individual good he can. The humblest of sincere Christians has as much right to enjoy the joys and comforts of religion as the most pious minister.

Passing from the matter of delegated societies, we will say a few words about the localization of any State Society which covers a territory of any extent comparable to that occupied by the profession of Virginia.

First. Experience or observation opposes the idea. Look at conventions—political or ecclesiastic—they go from one city to another annually.

Secondly. An organization that becomes localized is apt, sooner or later, to become a local society.

Thirdly. By going from section to section of the State, sooner or later all will become familiar with the objects and methods of operating that inures to the common welfare. The people as well as the doctors of the community in which the Society may meet will obtain broader views, which ultimately will result in reward to both the community and profession.

Fourthly. Those who have not the pecuniary means to attend sessions at great distances or in expensive centres, can

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become interested by active participation in meetings that occur in their midst.

Many other suggestions that bear on this line of argument present themselves; but if we have succeeded in stimulating inquiry as to the two points we have raised, we have no fear but that others will agree in our opinion—that a *State* Medical Society should *not* be a delegated body; *nor* should it be located as to any one point in the State.

The Atlantic Journal of Medicine, of this city, has made its appearance. Both of the original articles in the August number are well prepared. The selections are good. The editorials relate mostly to matters of local interest. Total number of pages in this issue, seventy-two. Price $3 a year. "May it live long and prosper."

Gaillard's Medical Journal, beginning July, 1883, has been enlarged to 120 pages *monthly*, and the weekly publication, begun last January, discontinued. The size of the page has also been increased. As good a journal as this has always been, we think we see improvements in its present issue.

Yellow Fever and Cholera need no longer be feared as epidemic diseases in this country this year. The National Board of Health, the Marine Hospital Service department of Government, and the State and Southern seaport City Boards of Health deserve great credit for their activity and watchfulness which have resulted in practically keeping away these two destroyers. Especially must every health authority be on its guard next spring and summer in reference to these two scourges.

Vaccinate is now the order of the day. Small-pox is still in the United States—now especially severe among the Western Indians. He shows himself to be ignorant who denies the value of vaccination. It is the duty of physicians to instruct their patients on this subject.

Dr. J. M. Toner.—The joint committee of the Congressional Library has ordered a bust in marble of this distinguished physician to be placed in the library. This is in recognition of the donation to the library of his extensive and valuable collection of medical and historical works. The bust will be executed by J. Q. A. Ward, the well-known sculptor.—*Louisville Med. News.*—*Gaillard's Med. Journal,* July, 1883.

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Fasting for Forty-two Days.—According to the *Cincinnati Lancet and Clinic*, August 25th, Dr. Francis L. Parker narrates a case in the *Medical News*, August 4th, in which the patient, a young lady, was suffering from a severe throat affection which prevented her from swallowing any kind of nourishment for forty-two days—thus surpassing by two days the famous fast of Dr. Tanner. Dr. Parker testifies to the probability of the story and seems to think that it is a genuine case of a forty-two days fast. At the beginning of the fast the lady weighed 197 pounds, and at the close 115 pounds—a much greater falling off than in Tanner's case.

Dr. Moses D. Hoge, Jr., a medical student now in Berlin, was the correspondent whose name was accidentally omitted from the interesting letter contained in our August issue. We have promise of other contributions from his excellent pen.

A Malpractice Suit Against an Estate.—In New Hampshire a suit was brought by a patient against the administrators of a deceased surgeon for injuries alleged to have been inflicted by the unskilful treatment of the surgeon. The suit was dismissed for technical reasons. The court held that as the action was for personal injuries, it could not be maintained after the death of the surgeon. It is the theory of the law that an action for injury done to the property is not affected by the death of the alleged wrongdoer, but can be brought against his legal representatives; but that an injury to the person, as in the case above cited, is of an entirely different character, and does not survive the death of the surgeon who is charged with inflicting the injury. This rule has in it the basis of justice, as there would seem to be little chance of defending such a suit when the most important witness as to the alleged malpractice—the surgeon himself—is dead and gone. The condition of the patient might be the result of other causes besides the unskilful treatment of the surgeon, but it would be difficult to show such facts after the death of the only person conversant with the case.—*New York Medical Journal.—Columbus Med. Jour.*, Aug. 1883.

Resorcin in diphtheria, according to Dr. J. Andreer (*Centralblatt fur die Med. Wissenschaften*), is rapidly increasing in use. He has used it in acute and chronic diseases, and now recommends it in infectious diseases. During the last five years he has treated 222 cases of diphtheria of all varieties, and all of

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these recovered. In the mild forms, cauterization with resorcin crystals, or with a concentrated resorcin vaseline ointment, was sufficient. In the more severe cases, resorcin had to be used internally and externally.—*Weekly Med. Review*, August 18, 1883.

Pasteur's Pension.—On the 12th instant, the bill increasing M Pasteur's pension from 12,000 to 25,000 francs, with reversion to his wife and children, passed the French Chamber without a division. In reply to certain dissentients, M. Paul Bert cited the English grant to Jenner, and scouted with warmth the charge of sordid motives brought against Pasteur.—*Med. Record*, Aug. 25, 1883.

Dr. John C. Dalton, the well-known physiologist, has resigned his position as Professor of Physiology at the College of Physicians and Surgeons, which he held for so many years. He will be succeeded by Dr. John G. Curtis, who for several years past has been the adjunct professor. Dr. Dalton's resignation is very generally regretted.—*Medical News.—American Practitioner*, Aug. 1883.

Obituary Record.

Dr. A. W. Fontaine, New Canton, Buckingham county, Va., died August 3rd, 1883, at his home. He had been in failing health for some months past. He had just returned from a trip of some months which, it was hoped, would restore his broken down constitution. Dr. Fontaine was a man of cleverness, and became very popular with his patients; and so extensive was his professional work that he had scarcely the time to enjoy domestic life. He was a Christian, and as such he died. His loss to the Medical Society of Virginia will be felt. To this and other journals he has contributed valuable papers. As a friend, we feel his loss.

M. Archambault, of Paris.—The French journals announce the decease of this distinguished physician, who was well-known in this country by his contributions to the literature of the diseases of children. He was a physician to the *Hôpital des Enfants*, and, like his master, Trousseau, was exceptionally successful with the operation of tracheotomy. His death was occasioned by a long and painful illness.—*N. Y. Med. Jour.*, Aug. 4.

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Original Communications.

ART. I.—**The Training and Education of the Feeble Minded, Imbecile and Idiotic.** By CHAS. H. STANLEY DAVIS, M. D. Meriden, Conn. (Continued from September No., 1883.)

MEDICAL AND HYGIENIC TREATMENT.

The basis of all treatment should be medical, as success in the treatment of idiots can only be obtained by keeping the patient in the highest possible health. In idiots, the functions of organic life are generally below the normal standard. They are especially deficient in taste; in fact, many of them seem to want the sense altogether. It is only the more intelligent class of idiots who notice any difference in the flavor of articles of food. M. Bourneville* mentions an idiot at the private institution at Gentilly, who had a most insatiable voracity, and ate all kinds of husks and offal. His food was cut in pieces for him, but he made no use of his teeth, swallowing everything with the greatest rapidity.

"About an hour after," writes M. Bourneville, "he might be seen in a pleased condition, his face radiant with joy, chewing the pieces of meat which he had swallowed, and which had come back from his stomach almost unchanged. Every day, at different times, the same thing went on. It was one of the best instances of rumination in man which could be seen."

The swallowing of the food without being masticated may be attributed to absence of intelligence, want of action

*Memoirè sur la Condition de la Bouche chez les Idiots, Paris, 1863.

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of the will on the organs of mastication and deglutition, deformity of, and want of relation between the same. Good, plain food and regular meals are quite as important to the idiot as they are to those who have perfect minds and bodies; and no progress can be made unless their nutritive processes, their powers of digestion and assimilation be well regulated. When we reflect upon the enormous supply of arterial blood in the convolutions of the brain wherein the mental work of the organ is elaborated, we cannot fail to be impressed with the primary necessity of abundant, good blood for the development of mind. The due supply of healthy blood to the brain depends upon the ingestion of good and sufficient food, and its digestion and conversion into blood, and the aëration of the latter in the lungs, and its impulsion by a strong heart through the cerebral vessels;* and to gain these ends good food is absolutely necessary. Therefore, bodily exercise is essential, as it helps digestion, expands the lungs and strengthens the heart. The food should not only be sufficient in amount and good in quality, but should be exhibited in a form suited to the powers of mastication of the various children; and they should be taught how to eat slowly, well, and in a cleanly manner. The use of the knife and fork is usually gained by imitation.

One of the earliest attempts at teaching, may be said to be teaching habits of cleanliness to the child. Cleanly habits and tidiness of person should be early inculcated. Habits are taught by repetition; and with idiots, habit is really a second nature, and no success can follow any attempt to render the children more comfortable to themselves and less troublesome to those around them, unless *clock-work* regularity be insisted upon.

*There are some idiots whose brains are well formed, of considerable weight, but which belong to individuals whose heart is very small; and its volume, in consequence, is out of all proportion to the size of the body. Dr. Hazen having observed a case of this description, draws the conclusion that idiocy may depend upon the feebleness of the cerebral circulation, and may occur in a brain perfectly well formed. This is in entire accordance with the teachings of physiology, and the experiments of Brown-Sequard upon a head which had been guillotined. Besides which, it has been observed with microcephalus idiots that, during fever, when the activity of the cerebral circulation is increassd, the intelligence has appeared to be much greater than in the normal state. *Researches in Idiocy.* By Dr. J. Mierzejeuski. *Jour. of Mental Science*, January, 1879, p. 567.

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If possible, the skin should be daily attended to by the sponge and other baths; not only for the sake of individual health, but also for the health and comfort of those with whom they are associated, in consequence of the peculiar exhalation from the skin of imbeciles. The water should be tepid, never cold, and not above 90°. In cases of great paroxysms of passion from undiscoverable causes, a bath is very beneficial with the water at 95°, and more hot water gradually poured in. It is equally beneficial at night to produce sleep in intense restlessness.

Some idiots give evidence of slight chronic irritation of the brain, obscure delusions and other marks of partial insanity. These, as well as epileptic idiots, require careful medical treatment, with great attention to clothing, lodging, dietary, etc.

Dr. Winslow* says: "That, though in a certain number of cases recovery takes place, the mental alienation of children and young people is a most serious disease, partly from their antecedents, and partly on account of the imperfect development of the cerebral and other organs."

Great fretfulness, striking, biting and destructiveness, which are occasionally observed in children from three to four years of age, as Griesinger† says, are to be regarded as true mania.

Many cases of idiocy, dementia and insanity are reported as occurring after scarlet fever, and some cases which show either marked change from the character antecedent to the attack of scarlatina, or else retain in after life some of the juvenile characteristics of the period prior to the attack of scarlet fever.‡

Idiots often suffer greatly from headache, especially if there is any tendency to force the intellectual capacities, instead of trusting to their progressive development. These must be treated with quietude, easily digestible food, extra warm clothing to the feet, and stimulants if the surface be chilly

*Dr. Winslow's *Psychological Journal*, No. XIII, New Series.

†*Mental Pathology and Therapeutics*. London, 1867, p. 142.

‡*Journal of Mental and Nervous Diseases*, April, 1879, p. 307; *Saint Louis Clinical Record*, Jan. 1882; *Annales Medico-Psychologiques*, Jan. and Mar. 1881.

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and the pulse low, and salines and purgatives if there be any fever. Neuralgic headaches should receive appropriate treatment. The bromides, iron and zinc are useful in many cases.

PHYSICAL TRAINING.

Physical education must always form an important part in the education of idiots, and all success depends upon the power of the teacher in strengthening their imitative gifts, their attention and their affection.

The child may be unable to use the muscles of its body from utter stupidity and incapacity to direct the complicated machinery of the human body, or from a deficiency of nervous or muscular power. The first duty of the teacher, then, is to correct the automatic motions, and supply the deficiencies of the muscular apparatus. The attenuated muscles have to be nourished by calling into exercise their functions. In all imbeciles there is a striking want of co-ordination in the muscular system, and it is by physical training only that the mutiny of the muscles can be overcome.

The object of the gymnastic drill is to strengthen the muscles and to teach simple movements, so as to improve their co-ordination; whose effectual performance depends quite as much upon the nutrition of the muscles, as upon the nervous system. The teacher has to commence with the simplest movements, such as holding the passive arms of the idiot and imparting a variety of motions, which in process of time the pupil accompanies with motions of his own, until he at length catches the spirit of imitation. These movements gradually become more complex, so that every voluntary muscle and every congeries of muscle shall be called into action and trained to fulfil with rapidity the end for which they are designed.

In this way, as Dr. Down says,* the muscular system is strengthened, the various acts of prehension, locomotion, and mastication are more effectually performed, the tongue becomes a willing agent, and the lips retain the saliva, the dropping of which formerly gave a repulsive characteristic

*On the Education and Training of the Feeble in Mind. By Dr. J. Langdon Down, London, 1876, p. 12.

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to the patient. Not only so—we secure by this means an improved nutrition of the central nervous ganglia themselves, which are influenced *pari passu* with the development of the physical powers. It is impossible to bring into harmonious relation the muscles and the will, without improving the physical quality of the brain and the nervous centres. Every motion must be taught well before the next is attempted, and the attention of the pupil is to be always attracted. Epileptics and imbeciles must not attempt any movements requiring extraordinary exertion.

Dr. Shuttleworth, in his account of his visit to some of the American training schools,* says: "The gymnasium is everywhere regarded as an important preliminary and adjunct to school exercises proper. To this purpose, a large room in convenient proximity to the class-room is devoted. At one end, is seen some form of gymnastic ladder, and around the wall, racks for wands, dumb-bells, rings and Indian clubs. On the floor lies a ladder with broad treads, over which the lowest grade of children are exercised in lifting their feet, carrying, it may be, when greatest steadiness has been attained, a cup of water which they are encouraged not to spill. Small bags filled with beans are thrown from master to pupil, the object of this exercise being to fix the idiot's wandering gaze, and to induce him to raise his hand, even in self-protection, to catch the bag. Then follow, by imitation, of the teacher, simple extension movements of the arms and legs. A more advanced class use the gymnastic ladder, upon which various exercises are planned, calculated primarily to fix the attention, and to develop the will, and, in a secondary degree, to strengthen the muscular system. Exercises with wands and light wooden dumb-bells follow, and time is kept to music."

MENTAL TRAINING.

Dr. Bucknill† says, the idiot is to be benefited, "First, by teaching him the use of his senses and of his muscles. By

*Notes of a Visit to American Institutions for Idiots and Imbeciles. By Dr. G. E. Shuttleworth, p. 7.

†Journal of Mental Science, July, 1873.

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teaching him to see and to hear, to touch and to taste; by teaching him to speak, and, as far as may be, to converse. By teaching him to sit, to stand, to walk and to play; then by teaching him to love and to trust, and not to hate and to fear; by replacing dull inanity or sullen moroseness with sociable attachment to others; by training and framing all the conditions of body and mind, however imperfect body and mind may be, towards wholesome, useful and agreeable activities, in place of chill and torpid inertness, or the dull ache of helpless discomfort; to bring him from that former state in which he lay—

'Remote, unfriended, melancholy, slow,'

somewhat within the circle of bright and active human life and affection."

Nearly thirty-five years ago, Dr. S. G. Howe wrote in reference to the Pennsylvania School for Feeble-Minded Children, that idiots form no exception to the law that every form of organized life is capable of being changed for better or worse by surrounding circumstances; and that it has rescued some children of merely feeble minds from the imbecility into which they had fallen either through abuse, or neglect, or unwise treatment; children who were considered as idiots, and who would have sunk into hopeless idiocy but for the help of this school. It has given speech to some who were dumb, and who, if left without special aid, would have remained dumb.

It has trained idiots to the command and use of muscle and limb. They feed themselves, dress themselves, and conduct themselves with decorum. Their gluttonous and unseemly habits have been broken up. They have been trained to temperance, cleanliness, and order, till these habits have become a second nature. Their powers of self-control have been increased, and they strive to make themselves less unsightly and disagreeable to others.

Their mental faculties and moral sentiments have been developed by lessons and exercises suitable to their feeble condition, and they have been raised in the scale of humanity. Every form of organized life is capable of being changed for better or worse by surrounding circumstances. It has been

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shown that idiots form no exception to this law. The deaf and blind are already instructed by special methods, and experience has shown conclusively that idiots can be treated by the physiological method, and that the muscular, imitative, nervous and reflective functions can be developed, and that these children, formerly the most solitary of human beings, shut out by their infirmity from all association with their fellow-beings, and from all enjoyment of life, can, to a certain extent, be made useful members of society, or at least, as Dr. Bucknill remarks, that if the happiness of a community, even of a community of idiots, be secured, the paths of goodness and of usefulness will not be left untrod.

At the Scottish National Institution for the Education of Imbecile Children at Larbert, for the purpose of education, pupils are divided into five grades.

1. Comprising those who can neither speak nor understand speech.
2. Those who can understand a few easy words.
3. Those who can speak, and can be taught to work.
4. Those who can be taught to read and write.
5. Those who can read books for themselves.

It is the general opinion of experienced superintendents that feeble-minded children should be placed in the hands of the teacher when about seven years of age, in order that bad habits may be prevented or eradicated, and diseased tendencies may be prevented.

Of those who came to the Larbert Institution, the Superintendent says: "In my own experience, pupils who came in at a comparatively late age, say from twelve to eighteen, have been found to improve more than those admitted at an earlier period of life."

Dr. Kind, Superintendent of the Asylum in Langenhagen, thinks that those who suffer from constitutional diseases capable of improvement under treatment cannot be sent in too soon; but if the circumstances of the parents or the conditions of the charitable do not allow of the pupil remaining longer than four or five years under training, that the best time to send him to the training-school is between the twelfth and sixteenth year.

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The intellectual training to which idiots should be submitted, must be based on a cultivation of the senses. The qualities, form, and relation of objects are to be taught by their sense of touch. As Dr. Seguin remarks, the idiotic hand is as idiotic as the brain, since the functions of the peripheric nerves are as much affected as those of the centres. Too much care and time cannot be bestowed upon the making of that hand. The hand is more sensitive, more habituated to feel than any of the internal organs of speech; more conscious of its tactile impressions; and, above all, its parts are admirably distinct, by which disposition the slightest of their movements and contacts are rendered appreciable to the sight and to the touch. *

Touch and feeling are naturally cultivated along with the use of the muscles. The sense of sight is to be educated by making the pupil note the difference between light and darkness, and later to appreciate color, size, shape, and relation. Idiots are fond of music, and as the senses predominate over the intellectual powers, the hearing of idiots is generally very good.

Says Dr. Ireland: "At Clapton Asylum I saw a musical drill conducted with great spirit by an old life-guard's man, who used a common tin whistle with wonderful effect."

All lessons should be of the simplest kind at first. Many of the exercises in Froebel's system of infant training, generally called the Kindergarten, are admirably adapted to backward children. Froebel taught that education means a harmonious development of all the bodily and mental powers; that the spontaneous is the raw material and the only element that is valuable in education, and that the teacher must connect all his instruction with these and graft it upon the spontaneous activity of the child; that the work of the teacher is not to give knowledge *ab extra*, but to supply material, means, and opportunities in a rational and harmonious order for the child's mind spontaneously to work upon; and that in the presentation of these materials or occupations there must be no break, because all occupations which train

* *Report on Education.* By E. Seguin. Milwaukee, 1880. Page 73.

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must be developed out of each other. The child is not taught, but led, and his senses and powers of hand and eye are cultivated by an elaborate series of exercises.

All idiots have a greater or less defect in the voice, and the power of speaking is no criterion of the amount of intelligence which they possess.

Says Dr. Wilbur:* "From my experience, however, I should say that language and speech will ordinarily come with developing intelligence, even if special efforts are not made to call them out. That is to say, with a certain degree of intelligence and observation, the idea of language and a comprehension of its use will come as in the case of a normal child, only relatively to the intelligence a little more backward. So, too, with a certain degree of control over the physical organization, coupled with the desire of expressing desires and wants, speech will generally follow."

More idiots are semi-mutes, many are mutes, and a very few are deaf and mute. The greater number, however, of those who remain mute do not speak simply because they have no ideas to express. As their mental faculties improve words come. Speaking lessons are founded upon the observation that imitation is strong in idiocy, and that habits are easily acquired by repetition, *i. e.*, that although originally deficient in their co-ordination, sets of muscles, by habitual exercise in a few simple motions, will gain in co-ordinating power. La Place, in his Essay on Probabilities† says: "If one frequently performs the actions which result from a particular modification of the internal organ, their reaction upon that organ may not only increase that modification, but sometimes give birth to it."

This is the object of the physiological training. Want of success in teaching idiots to speak must not cause teachers to despair, for the voice comes slowly, and the least sign of advancement should stimulate the teacher to further work.

At the Eastern Counties' Asylum for Idiots and Imbeciles, Essex Hall, the following preliminary drill is used preparatory to the speaking lessons:

* "The Relation of Speech or Language to Idiocy."—*Proceed. of Associaiion of Med. Officers of Institutions for Idiots, etc.*, 1879, p. 75.)

† *Essai Philosophique sur les Probabilities*, Paris, 1816, p. 227.

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(A)—1. Order the mouth to be closed, the jaws being well together.

2. Order the mouth to be opened wide.

3. The jaws to be closed, and the lips to be separated and closed slowly and firmly.

4. A flat piece of box-wood to be placed between the lips of each pupil. They are to be made, by example and order, to press the lips to it, and to hold it without using the teeth for some time.

5. The mouth to be opened slowly (half distance) and closed slowly—the lips coming together, but not the jaws—remain in the closed position.

6. The same movement more quickly performed.

(B)—1. The mouth to be half opened, and the tongue pushed *slowly* out to its full extent, then withdrawn slowly —*no grimaces.*

2. The same, more rapidly performed.

3. The mouth to be opened wide, the tongue's *tip* to be passed out of the mouth, and turned up to touch the upper lip, and return.

4. Mouth being open wide, the tip of the tongue to be carried slowly to the roof of the mouth, just behind the front upper teeth—the lower jaw must move a little with the tongue.

5. Mouth being half open, the tip of the tongue to be placed between the teeth and withdrawn (this is to be done slowly.)

6. The mouth being well open, the back of the tongue to be pressed against the back part of the palate.

7. The mouth being well open, the tongue to be drawn back into the throat.

The teacher and the example all go through all these movements, one after the other, very slowly.

When the preliminary speaking drill is tolerably well performed, the semi-mutes should be separated from the mutes, and placed in a class which should commence the second part of the speaking drill. Children able to utter vowel sounds may be allowed to place a vowel before the consonants of the syllables which are advised to be taught.

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The success of these lessons entirely depends upon the grounding in the preliminary drill, and it is simply waste of time to attempt them if the muscles of the jaws, tongue, and lips are not well nourished or well under the command of the will. *

In commenting upon this exercise, Dr. Ireland says: "But almost all those preliminary motions can be called into play, and all every day executed during the process of eating, as almost all the muscles used in deglutition are also used in speaking; and if the lips require separate exercise, this will be much easier done by providing the child with a whistle, and encouraging him to blow upon it, than by making him press his lips on a flat piece of box-wood. At the same time we do not deny the indirect advantage of ordinary drill in helping the utterance of speech by increasing the general command over the muscles."

Direct mental cultivation should be very carefully pursued, for the idiot's brain is easily overtaxed, and epileptic fits and other serious nervous troubles are often the result. Teachers are apt to follow the old plan of crowding as much into a child's brain as is possible in a given time, without considering or taking into account hereditary defects, abnormal temperaments, constitutional dullness or precocity, and such other abnormal conditions as prevent many children from keeping up with the more favored and precocious children.

Before the idiot can read the mind must have attained a considerable capacity. They should be taught to recognize syllables before teaching them to know their letters.

The way in which the English language is spelled, presents a great difficulty in teaching the imbecile to read, which is scarcely felt at all in German, and comparatively little felt in French.

An imbecile girl who had learned to read said, as if a bright idea had just struck her, "You sometimes can know how to say a word from the way it is spelt."

Experience has shown that all the mental faculties, both moral and intellectual, may be partially developed, and that

* Duncan and Millard's Manual, p. 133.

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imbecile children, as a rule, when young, are placid, gentle, mutually kind and affectionate, but under demoralizing influences they become perverse, obstinate, and brutal. But there are a class of children well described by Professor Maudsley,* who are of a defective mental capacity not reaching the degree of idiocy, or even of positive imbecility, whom it is very difficult to know what to do with sometimes. "They are dull, stupid, appear careless, indifferent, and as if they will not try to learn anything, and display low or vicious tastes; when sent to a respectable school, they are commonly after some time sent home again as impracticable. Their inability to learn looks very much like stupidity and obstinacy, when it is really the result of disease, and marks a certain degree of imbecility.

"There is another class of boys who cause great trouble and anxiety to their parents and to all who have to do with them. Afflicted with a positive moral imbecility, they are inherently vicious; they are instinctive liars and thieves, stealing and deceiving with a cunning and skill which could never be acquired; they display no trace of affection for their parents, or of feeling for others; the only care which they evince is to contrive the means of indulging their passions and vicious propensities. Intellectually they are certainly defective also, for they usually read no better when they are sixteen years old than a healthy child of six years of age would do; and yet they are very cute in deception and in gratifying the desires of their vicious natures. Passionate, selfish, cruel, and sometimes violent, they are intolerable at home; and if they are sent to school they are sure to be expelled. Where they belong to the lower classes, they find their way to prison many times; when they belong to the better classes, there is nothing for it but to seek out some firm and judicious person who, for suitable remuneration, will take care of them, keep them out of mischief, and, while checking their vicious propensities, will try to discover and foster any better tendencies which they may have in them."

Such children, with proper associations and training, usu-

* Physiology and Pathology of the Mind.

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ally are greatly improved. The most troublesome cases are the epileptic idiots; their temper is often unbearable, even under the most careful management, and, indeed, many are insane at times. But under proper medical treatment to diminish the fits, a certain amount of training can be received. But it is a matter of experience that less can be taught to epileptics than to any other class except those suffering from water on the brain.

ART. II.—**Sickness of Pregnancy Treated by Local Applications to the Os and Cervix Uteri, with Report of Cases.*** By JNO. S. APPERSON, M. D., Town House, Va.

As an attendant upon pregnancy, especially in the earlier months, except the first, it is well known that nausea and vomiting is a frequent and disagreeable condition, and sometimes so excessive and severe that death even is produced by inanition caused thereby. Dr. Playfair states that Gueniot collected 118 cases of the graver forms "of the disease," out of which forty-six proved fatal; and out of the seventy-two that recovered, in forty-two the symptoms only ceased when abortion, either spontaneously or artificially produced, had occurred.

This sickness, taking place rarely before the commencement of the second month of utero-gestation, in a majority of instances ceases, or is so far mitigated after the expiration of the third or fourth month, or about the time of quickening, that it is pretty well borne by most women, and particularly those in whose organization resistance to diseases of a neuropathic nature is well developed.

But we now and then meet with cases where relief does not come so speedily—where there is no diminution of bodily suffering until the poor woman has dragged wearily and painfully through the whole period of gestation, or has undergone the perils of spontaneous or artificially produced abortion; accepting thereby in truth the remark, that there

*This paper was prepared for the Medical Society of Virginia, Session 1883, but being received too late for presentation to that body has been adopted by this *Monthly*.

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are times when: "The coffin lid becomes a plank of safety."

That normal pregnancy involves per necessity this particular disturbance of the digestive apparatus, has been frequently alleged by some of the best and most prominent writers. Dr. Ramsbotham says that when vomiting "is entirely absent, utero-gestation does not proceed with its usual regularity and activity," and Dr. Churchill agrees with him, and adds that "irregularities in this particular are frequently followed by deviations in the other symptoms of pregnancy;" or, as Dr. Playfair states, as I understand him: "It is an old observation, that when sickness of pregnancy is entirely absent, other, and generally more distressing sympathetic derangements are often met with, such as a tendency to syncope. Dr. Bedford has laid especial stress on this point, and maintains that under such circumstances women are peculiarly liable to miscarry."

Be this as it may, it is a severe necessity, and entails upon the poor woman perhaps a greater amount of suffering, though not so acute, than child-birth itself, and reminds us that it is the duty of our office to use all diligence in securing and adopting the means best suited to its amelioration and cure.

As to the *direct causes*, or the mode of action by which these phenomena in pregnant women are produced, it is not the purpose of this paper to consider. We have been taught to call it *sympathy*. Whatever that may be, or, as Dr. Meigs, in his characteristic way, explains it, the reproductive organs, having a direct connection with the cerebro-spinal and ganglionic system of innervation, are among the most powerful disturbers of the complacency of the organisms—constituting an *imperium in imperio* whose behests are not to be disobeyed. "These organs," says he, "can disturb the brain, the respiration, the digestion, the circulation, the secretion, the nutrition," and "when the womb has become the seat of advancing gestation, and feels the impulse of development, the *complacency* of the innervation is, generally, more or less discomposed." That is Dr. Meigs' view, and may be as near the truth as we shall get, even if we attempt the discussion at this particular time of the opinions

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of Dr. Henry Burnett, with reference to the congestive and inflammatory condition of the organ directly involved, or those of Dr. Grailey Hewitt, urging the responsibility as resting almost entirely on malposition of the uterus.

The following report of cases, taken partly from memory and partly from notes, made at the time they were under treatment, I hope will not prove entirely uninteresting to the Society, and that they may be useful to some Fellow as they are to me.

Case.—Mrs. L. T., aet. 30, rather delicately constituted, though she had enjoyed fair health, consulted me June 28th, 1878, in her third pregnancy. The first pregnancy terminated in an abortion, with so little trouble, I may, with propriety, say that it was *unconscious*. Getting out of bed at night to empty the bladder, having had a slight show the previous day, the conception entire, with sac unbroken and containing the fœtus, dropped into the vessel, and was found by her next morning, when I was sent for to tell her what it was. The next pregnancy went on to term, though she suffered very much from nausea during the earlier months, but did not consult a physician, because she was told by her friends that nothing could be done for her relief.

The third pregnancy, above mentioned, began about the latter part of April, 1878. Nausea commenced about the middle of May following, and at the time the monthly flow was due in that month a bloody discharge took place, and was almost constant until the date of June 21, 1878; sometimes it amounted to a smart hæmorrhage. I took charge of the case and directed absolute rest in bed, opiates and astringents, also the usual remedies for nausea and vomiting, but I found it necessary to watch the case closely, and it gave much concern for more than two months. The metrorrhagia ceased after she was much reduced in flesh and strength, aided, of course, by the nausea and vomiting. She finally got up and went to term in fair condition, and was safely delivered. I cannot now say that I think she was particularly benefited by anything I did for her except in so far as it pertained to the treatment of the blood waste.

She became pregnant again about the latter part of January, 1880. During the first part of April following I was called to see her. Her old enemy—metrorrhagia—had commenced on her again, accompanied by intense nausea and persistent vomiting. The flow of blood, while it was not

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excessive to the extent of suggesting immediate danger, yet it was almost constant until there was a free gush of bright blood that clotted in the vagina. She was at once placed in bed and urged to be as nearly absolutely quiet as possible. Acetate of lead and opium, *prore nata*, were given, and in case of an increase in the waste, or urgent necessity for it, cold applications to abdomen were directed; also acid sulphurici aromat, fifteen drops, *ter in die*, if the stomach will tolerate it, and carbonate of magnesia as occasion may require to keep the alimentary canal open. On the occasion of a visit a day or two afterwards, digital examination revealed the uterus enlarged, but in good position, except rather low in the pelvis, vaginal face of cervix broad, soft and unequal; os patulous and rough. Passed finger into the os and removed an elongated clot of dark blood and mucus mixed. This was followed by bright blood, which caused me to desist from further interference with the organ.

From this time to the 8th of May following, I saw the patient every few days, but it would be unnecessarily tedious to give a minute account of her condition and the treatment advised at each visit. Suffice to say that she grew worse. Pain about hips and back had become troublesome; the metrorrhagia continued more or less every day or two, and gave to her clothing and bed an offensive odor. The nausea and vomiting increased, and emaciation was becoming more and more apparent every day. Pulse over 100 and irritable, and my patient despondent; and, as may be judged from the following quotation, taken from my note-book at the time, I was not as cheerful as a conscientious doctor likes to be: "Worse than usual; nausea and depression excessive; surface of body covered with cold perspiration, and the patient asking to be fanned frequently, because the fresh air affords her a little comfort; pulse 110; tongue moist and slightly coated. The least movement in bed causes violent retching."

During the time, to the present, I had tried various remedies. Neither the opium and acetate of lead given at the outset, nor the acid, could be used on account of the stomach. Laudanum enematad and bromide of potassium suppositories did no good—they made her, she thought, more uncomfortable. Carbolic acid with aromatics, alkalies, pepsin, ingluvin and bismuth, also oxatate of cerium, lime-water and milk, all had their share in the trial. Had the limbs bathed once or twice a day in whiskey, and gave ice; used morphia on the surface of a small blister, and occa-

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sionally a dose internally, which usually gave her a little sleep.

May 8th, I introduced a Buttle speculum. The uterus was by this time considerably enlarged and lower still in the pelvis, and no trouble to get a ready and good view of the cervix; found its vaginal face deep violet hue, ending in true erosion dipping into the os, from which projected a stringy clot of blood and mucus as large as my little finger. This I wiped away with cotton on end of probe, and with soap and water on sponge washed off the secretions hanging about the os and around the cervix, then applied a solution of glycerin with carbolic acid (nearly saturated solution) freely over the vaginal cervix, and as deeply as I thought it safe to go into the canal. After this a cotton wad, saturated with glycerin and thirty drops tr. opii, and with a string attached, was placed under the cervix.

The operation was well borne, and gave very little pain. In less than an hour she expressed herself as already sensible of relief. I directed that in from ten to twelve hours the wad be withdrawn by pulling the string which was left hanging from the opening of the vulva, and a weak solution of permanganate of potassium be injected gently into the vagina – she having used this wash previously.

At my next visit I found her much improved. The same application was made in the same way on two subsequent occasions, five days apart, and very little medicine used in any way. At the end of three or four weeks I had the inexpressible satisfaction of finding my patient able to take short buggy rides, and her convalescence and comfort assured. She went out without further trouble to term and did well. She says now that from the hour the first application was made she was conscious that a change had been produced in the situation that brought relief, and it remained so; and with me, no matter what success or failure may attend the same course of treatment in other similar cases, the conviction must remain that in this case the local applications produced that change.

This lady became pregnant again about the 1st of January, 1882. About the 1st of March following, I was called to see her. The old symptoms, except the mettorrhagia, present. She readily accepted my proposition to begin at once the local treatment, and prevent, if possible, the distress she experienced on preceding occasions. There was no erosion, but little if any less congestion about the os and cervix than when treated during last pregnancy. The application of

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carbolic acid was made every five or six days until the 15th of April following, when she was so much improved that she resumed the charge of her household affairs, and was pretty well until confinement, which fell on the 29th of September.

Another Case.—Mrs. L., æt. 26, married six years, one child four years old. Never was considered a stout woman, though fully up to the average. Inherited a nervous temperament, and suffered from some uterine disorder, for which she was treated before and after marriage; and is much opposed to that mode of treatment.

Last menstrual period passed off on the 2nd of February, 1881, and nausea commenced first week in March, following. I was consulted by her on the 11th of March. Said she was sick day and night. Complete loathing of food, and vomits usually after it is taken. Upon her own suggestion she has been using hydrate of chloral at bed-time to procure rest, but besides the sleep it affords her, she had not been benefitted by its use. Bowels and bladder normal. Had a slight leucorrhœal discharge, though this is common with her.

Taking for granted that she was pregnant, I advised her to interest herself as much as possible about other matters than her own suffering; eat what agreed best with the stomach, or what disagreed least; to have viij grains blue-mass every third night until three doses were taken, and carbonate of magnesia if necessary, or any simple laxative, to keep bowels open. Gave also the following combination as a stomachic:

℞. Syr. rhei aromat.....ℨi
Tr. zingerberis.....
Spts. lavender comp.....ā ā ℨss
Acid carbolic.....gr. x
M. S. Half to one teaspoonful p. r. n.

If restless, especially at night, or in much pain, to have 60 gtts. tr. opii with starch water per anum, and the use of natural alum water as a vaginal wash.

March 22nd.—Not improved. Laudanum enema made her sick, though in a different way. The aromatic mixture did not afford even temporary relief. For two days there has been a slight show of blood. Does not rest at night except one night in three or four.

I suggested to her that possibly she might be benefitted by a metroscopical examination and attention to the organ if it should not be in a healthy condition, or by local application to the cervix. She consented to have it done if she did not improve in a short time, stating that she was sick during nearly the whole of her previous pregnancy.

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March 25th.—Visited her with the intention of carrying out my purpose of local treatment, but she thinks she is better, having rested well for two or three successive nights, and declines to submit to instrumental treatment except as a last resort. No further bloody discharge and less leucorrhœa. I did not insist upon it, although I confess my opinion was that the relief she thought she experienced was only temporary. There was no improvement in her appetite or digestion, and she was beginning to look pale and worn. I prescribed for her, in addition to the mixture above stated, compound infusion of gentian before, and lactopeptin after, meals. Except when laudanum has been used, the bowels have required nothing.

April 1st.—A letter from her husband to-day informs me that his wife is worse and was willing that anything promising relief might be done for her. Found her lying down, though dressed; as she said when I reached her she had gotten up with the purpose of trying to appear well enough to afford a pretext for objecting to the examination. Has vomited more than usual since last visit—mainly bile and mucus, and suffered more, especially in the afternoon.

Digital examination: Uterus enlarged, low in pelvis, and right lateral displacement; os tincæ closed, vaginal face of cervix uneven, and several small prominences scattered over its surface. Parts not unusually moist. Speculum shows nothing abnormal except these prominences above mentioned, which are shown to be mucous crypts standing out from the vaginal cervix, also a plainly visible scar on the posterior lip of the os, presumed to be the result of a laceration which occurred at her confinement; no erosion or abrasion of mucous membrane visible anywhere.

Punctured the more prominent of the mucous cysts with the uterine scarificator, and allowed their contents to escape, and then after wiping off the secretions with a sponge dipped in soap and water, and cleansing the parts thoroughly, I applied the carbolic acid dissolved in glycerin freely to whole vaginal face of cervix and os tincæ, then left a tampon of cotton with glycerin and ʒj tr. opii as in former case, to be withdrawn in eight hours.

Unlike the other case, she became very sick under the operation and remained so for at least an hour, vomiting several times the meanwhile. Directed that she remain in bed for at least two days, and continue the medicines previously prescribed.

April 6th.—Found her to-day sitting up and directing

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household affairs, but says she is not conscious of much relief, though I thought she looked more comfortable. Complains of a painful lump in the stomach, or the sensation of such, and feels like she ought to be able to throw it up, but vomiting made no impression on it.

Speculum used again, and a similar application was made as at first, barely dipping into the canal. Very little moisture about parts, and mucous crypts entirely absent—those punctured and those not were alike gone, and no sign remained. Suffered less from the application, presumably because it was carried less deeply into the canal. Prescribed effervescing draught with two or three drops dilute hydrocyanic acid to be taken two or three times a day. Continued the gentian and pepsin, and if stomach will tolerate the dose, thirty grains of potassium bromide at bed-time, or if not, double the quantity per anum. If sensation in stomach remain, apply a small blister.

April 18th.—Found patient quite bright this morning. Since the second day after my last visit, she has been better than since her sickness commenced. Has an occasional spell of nausea, but had no vomiting. Blister over stomach not used because not needed. Potassium bromide did not harm the stomach, and she slept well after using it. Appetite improving, though still poor. Did not use speculum because, even if the improvement in the case was due to local treatment, I confess I have some misgivings as to the risk in pushing this procedure too far.

Directed a continuance of the effervescing mixture and acid, though she has not used it oftener than twice daily, leave off the gentian and take five drops tr. nux vomica before meals. Continued the pepsin.

I saw her no more until after her confinement, when I was told that she passed the remainder of her term very comfortably.

Case.—On the 16th of July, 1883, I was asked to see Mrs. N. C.; æt. 41; pregnant two months with her ninth child. When well she is a woman of fine physique, and except the sickness attendant upon pregnancy and labor, she has always enjoyed most excellent health. Nausea and vomiting, however, when in this condition, have been excessive, and now with the care of a growing family on her hands, and judging from past experiences (she having suffered usually until relieved by labor), six or seven months of almost perpetual nausea to pass through, she is almost desperate. Said when I saw her that she had gone to bed in despair. There were

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obstinate constipation, complete anorexia, and extreme salivation—spitting about three pints of ropy mucous in twenty-four hours, a portion of which came from the stomach. Worse during the night; has been able to sleep but little.

As she was living some distance from me, I advised her to visit my neighborhood and spend a week or two, thinking if I did her no good the change might be beneficial. She reluctantly consented to do so, and I saw her again on the 18th, when I passed a speculum and examined the uterus. Found it in every respect, as far as my observation led me to conclude, in good condition. No displacement except the usual sinking due to increased weight of the organ. Os-tincæ was free from any discharge; color very slightly if at all heightened, not more than I have often seen in non-pregnant women. No tenderness supra pubic or otherwise.

I made the usual application of carbolic acid dissolved in glycerin, brushing over the vaginal face of the organ, and dipping into the canal a short distance, three or four times. Then in upper part of vagina packed a wad of cotton with glycerin and tr. opii, and gave a pill composed of blue mass, extract colocynth, comp., and extract hyoscyanus.

Passed a moderately comfortable night. No pain followed the application, and whether from the opiate or other treatment, there was a relief in reflex action, slept more than she had in one night for three weeks. During the day the pill caused a good deal of pain by griping. Enema of warm water brought away a quantity of solid fecal matter. Food retained better.

It is unnecessary for our purpose to give in detail the treatment and symptoms for each day, but will merely state that the local application was made four times—the second, three days after the first, followed next day by a slight show of blood. The third and fourth applications four days apart. The constipated state of bowels was corrected by an elixir of senna, cascara sagrada extract, with aromatics, and the stomach treated with fluid extract nux vomica before meals, and lactopeptin elixir after meals, with bromide potassium at bed time occasionally. No pain followed the local treatment at any time—always a better night and day following. At the expiration of twelve days she was eating heartily of all kinds of food, rarely vomited at all, slept well, and showed marked improvement in every way, especially in disposition. She went home, and I am informed is cheerful and happy. Not entirely rid of the symptoms, but better than she has ever been under the same conditions, and says

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as disagreeable as the treatment, it is a boon of no small value.

It is proper to note with reference to these cases, that in the treatment of the first case the first time there was marked erosion, with a free discharge of glutinous and bloody mucus. The first application was followed by prompt releif to the distressing symptoms, doubtless because the caustic acted directly upon the sensitive nerve fibres exposed possibly by the erosion. In the next treatment of this case there was congestion only—erosion not yet having taken place. This required a longer time—seven applications—to be relieved. In the next case there was congestion also, but to a much less extent, and the effect must have been revulsive, and probably depletory by local action. In the last case there was no morbid condition of the parts that I could see, and I shall leave the rationale of the treatment to be discussed by those interested in such matters.

In looking over the history of this mode of treating this disease or state of the symptoms, as far as the evidence to which I have access shows, it seems not to have been practised to any considerable extent.

Dr. M. O. Jones, of Chicago, at the meeting of the *American Medical Association* in 1877, mentioned to Dr. J. Marion Sims his experience in the treatment of the affection by this means, and Dr. Sims requested Dr. Jones to give him a written statement of his experience, which Dr. Jones did, detailing five cases treated in this way during the six years previous to that date, or the date of his paper.

Dr. Jones' idea was that the phenomenon of the sickness of pregnancy was due entirely to reflex action, and that to treat the organ directly promised more for the patient's relief than the usual means resorted to in such cases. It is proper also to remark that out of the five cases so treated by him, in two only was there any erosion of the mucous covering of the os and cervix—the others being entirely healthy.

Dr. Sims contributed this paper of Dr. Jones' to the *London Lancet*, of February 23, 1878, and in his comments thereon reported another interesting case relieved in the same way. This case also presented marked erosion of the

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mucous membrane, and profuse glutinous leucorrhoeal discharge from the os tincæ. There was also malposition of the organ.

Again in 1880 Dr. Sims contributes another paper to the *Archives of Medicine* as *resume* of the subject, and says: "It has long been regarded as a reflex symptom, but has not been treated as such." He also mentions a case treated in Paris in 1878, in which there was no erosion, by local application of nitrate of silver, "without decided improvement." He then in the same case tried dilatation of the os, as suggested by Dr. Copeman, with marked improvement in two or three days, but not complete relief until a ring pessary had been applied.

In this paper there are injunctions of caution in the practice of these several modes, and properly so, because we can hardly expect so sensitive an organ in this peculiar condition to allow unlimited searing, straightening, stretching and pressure, without becoming rebellious and throwing off its contents.

A rather curious observation might here be made in connection with the literature of the subject. Drs. Jones and Sims both seem to regard this treatment as very nearly, if not quite original, with Dr. Jones: when, if I mistake not, Dr. Bennett, in his book published thirty-five or forty years ago, on diseases of the os and cervix uteri, suggests that even in pregnant women, the local treatment be carried out in cases of what at that time he called *ulceration*. I have not his book in my library, and remark only from memory, but my impression is that he urged it because of the prompt relief it gave to certain symptoms.

In the *Half Yearly Abstract* for January and July, 1868, page 226, is an article taken from the *Lancet*, in which it is stated that Dr. Playfair, Obstretrician to King's College Hospital, was of the opinion, "Where morning sickness was excessive he has frequently verified the opinion of Dr. Clay and others, that there is some morbid condition of the uterus itself, and has found local treatment, such as the occasional application of leeches to the vulva, or of iodine paint to the erosions of the cervix uteri to be of great service."

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Dr. Playfair himself, in his *System of Midwifery*, 1878, also has a special paragraph on *local treatment*, and on the authority of Dr. Henry Bennett, and Dr. Clay, of Manchester, recommends the local application of nitrate of silver, especially when there is erosion. Dr. Bennett was of the opinion that in almost all cases, where the symptoms were urgent, there were congestive inflammation and granular erosion.

In concluding a paper already too long, I will say that since the publication of Dr. Sims' paper, several physicans have reported cases treated in the same way. Among them I have seen one report by Dr. J. A. Goggans, of Bulger's Mills, Ala., in the *Virginia Medical Monthly*, September, 1878. He gives three cases, but does not give the date of the treatment.

What the result of this treatment may be in future we cannot foresee. It often happens that *success* alone are at first given, when after awhile *failures* come forward to the detriment of the former.

I would strongly urge upon all who find it necessary to practice either of the plans indicated in this paper, *i. e.*, dilatation as recommended by Dr. Copeman, reposition as suggested by Dr. Hewitt, or the application of caustics to the os and cervix uteri—that the utmost care and prudence be exercised in their management.

ART. III.—**Predisposition and the Bacillus Tuberculosis Essential Factors in the Production of Consumption of the Lungs and Air Passages.** By HARVEY L. BYRD, M. D., etc., President and Professor of Obstetrics and Diseases of Women and Children in the Baltimore Medical College, Baltimore, Maryland.

It appears almost absolutely certain that investigations which are now being made will establish the fact that a large majority of the numerous diseases to which mankind is exposed, originate in certain germs, or micro-organisms, that are received through the atmosphere and the water by which we are surrounded, and which are so necessary, not only to our comfort, but very existence. All medical men are therefore, or should be, interested in the settlement of the con-

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troverted points in regard to any of the bacilli, or micrococci, which have been brought before the profession. The matter of the *bacillus tuberculosis* as announced by Koch, and sustained by many other investigators, may still be regarded as unsettled. There appears to be, however, a preponderance of evidence in favor of Koch's investigations and statements that is strongly in the direction of an ascertained fact. But whether he and his followers have found and accurately described the true agent concerned in the development of consumption, or not, there is certainly no lack of ability and energy displayed in the work they have thus far accomplished, and there are probably very few physicians who do not feel that if the essential micro-organism that produces that disease has not yet been discovered, it will soon be found.

As far as can be gleaned from the medical periodical literature of the times, the profession generally seems to be yielding to the opinion that the terrible malady which appears at the caption of this article, and which is dragging annually so many of the young and gifted of our race to untimely graves, is brought into activity through the agency of germs or organisms from without the body.

It is not my purpose, however, to dwell upon this point in the present communication to the *Monthly*. Nor is it necessary to enter the arena of controversy or to zealously espouse any one of the theories concerning the essential nature and pathology, of consumption, or whether a micro-organism having the ability to develop that disease in the lungs or elsewhere has been made manifest to our visual organs. But I purpose to offer a few practical ideas for what they may be worth at this particular juncture. And I will therefore remark that of all the ills alluded to in the initiatory paragraph of this paper, consumption is of pre-eminent importance to the physician, at least as all the races and conditions of mankind are more or less exposed to its ravages now. I say *now*, because consumption was almost unknown in the genuine negro half a century since, and was of quite rare occurrence three or four decades ago. But more upon this point at a subsequent time.

If the proposition is true that all the diseases from which

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mankind suffer—except, of course, those which result from traumatisms, caused by the action of mechanical forces, etc. —are due to the presence of germs, bacilli, or micro-organisms, existing or floating in the air or water, and I am quite satisfied that such is the fact, we have a sure but probably not fully appreciated, at present, foundation upon which to commence the explanation of all of them, and channels thus opened through which to proceed to the *ultimathule* of scientific investigation if we will. And should *heredity* be admitted at its proper value, as a factor in our studies of cause and effect, in such investigations, we will find our deduction and conclusion in regard to the origin and development of diseases rendered much less difficult of accomplishment. The laity, as well as the profession, are enabled to see the resemblance of the parent as it may be transmitted in the *tout ensemble* of features in the offspring. And in some instances a single feature is sufficient to impress one with such a resemblance to a progenitor, or an ancestor, two or three generations back, as in the shape and development of the nose, mouth, etc. As a case in point, the thick lips in the imperial house of Austria may be mentioned.

Again, supernumerary fingers and toes have been known to occur in a family for two or three generations. These facts need no argument or further illustration for their proof, and they should afford reasonable assurance, if the fact had not been developed in some instances under the scalpel, of peculiarity of form and structure in the *internal* organs and tissues, as of hereditary transmission from generation to generation!

All physicians are aware that numerous cases of *predisposition* to certain diseases are to be found in almost every community, and *accoucheurs* know that not only peculiarities in the form of the pelvis and genital organs in the female, are transmitted to the daughter in many cases, but that even the *phgsiological* action of the uterus itself will be marked in certain families for several generations. If we add to these *hereditary* transmissions, as I feel sure that we should, a *sthenic* or an *asthenic* condition as of undoubtedly the same origin, in many cases, at least, it will be found that too

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much emphasis has not been given to this point in the present article.

Should the conciseness attempted in the foregoing sentences give rise to seeming ambiguity upon any of the points discussed, it will readily disappear when the two leading factors adverted to already, viz.: the *parasite* and *heredity* are properly considered in the development of consumption and its consequences.

The soil, so to speak, is prepared hereditarily for the action for the germs ere they find their lodgment in the tissues of the respiratory apparatus, or elsewhere. Brought thus into juxta-position, or into contact with each other, the seed finds a genial soil, and consumption or tuberculosis is the outcome. It would seem thus to be logically certain, though we may not be able to demonstrate the fact with mathematical accuracy and precision, that if the bacillus tuberculosis has been actually discovered, we have in the two factors just mentioned the means of clearing away the mists that have developed consumption, and have consequently opened up to us a rational and correct application of the operative agents in the treatment of that dreaded scourge of our race.

When we add to what has been said already, the fact that certain *parasites* and *germs elect* certain tissues and parts of the organism for their abode or development, and cannot, in some instances at least, be made or induced to trespass much, if any distance beyond the preferred locality, or that best suited for their operations, it will be readily understood how it is that certain families are greatly afflicted with consumption in certain climates and places, whilst others having no hereditary preparation for the germs of that disease to act upon, remain the neighbors of the unfortunate ones for generations, entirely free from its ravages.

What is true of the ravages of the bacillus that produces consumption of the lungs and air passages, is equally true, I have no doubt, in regard to the germs of other diseases under other circumstances. Twenty-nine years ago I had the temerity to state and insist upon the germ origin of yellow fever; and from my experience in it, and observation and experience also, in almost all the other diseases that af-

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flict humanity, from that time until now, I am fully convinced of the correctness of what has already been stated in this paper, viz: that all the diseases from which mankind now suffer, especially those which result from traumatisms, or the action of mechanical forces, including heat, cold and electricity, etc., are due to, or have their origin in germs, bacilli, or micro-organisms existing in the atmosphere or water, or from *contact* with those suffering with what have been known as contagious or infectious diseases resulting from specific germs, or bacilli.

As there are probably very few physicians who are readers of the *Monthly*, who would be likely to dissent or controvert the statements made in the above paragraph, I will trespass but a little further, and endeavor to reiterate with as much perspicuity as practicable, that a *predisposition* must exist in the lungs or air passages, whether *hereditary* or *acquired*, as a *condition precedent* to the development of consumption, and that a certain germ or micro-organism, probably the *bacillus tuberculosis* of Koch, must find a nidus or lodgment upon such predisposed surface or situation in order to the existence of that terrible scourge of humanity. With the foregoing views, honestly entertained, I think we may safely hope, and indeed confidently expect, with its fulfilment, ere the termination of the present decade, and that physicians will not only be able to *prevent*, but actually *cure* consumption, when not too far advanced, and that too upon strictly scientific principles. On a subsequent occasion, some of the agents and means in acomplishing this important object may be adverted to.

137 *N. Arlington Avenue.*

Dr. Kingman, in the *Boston Med. and Surg. Journal* of July 14th, call special attention to the advantages of Prague for the study of Obstetrics. A new departure by several of the assistants is to give clinics in *English*. This will be done in the latter part of the summer, if sufficient English-speaking students shall warrant it.

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Clinical Reports.

Report of a Cancerous Liver Weighing Seventeen and a-half Pounds.*

By C. P. WERTENBAKER, M. D., Charlottesvile, Va.

Martha Allen, colored, age 47, married washer-woman, was the third child of a family of seven—three boys and four girls, of whom two of the boys are dead. Her parents were both healthy; her mother is still living; her father died during the war. Neither of them had ever had any syphilitic or scrofulous affections, as far as known. They were a healthy family. The subject of this report was the mother of seven children, of whom four are now living and in good health. The others died in infancy. Her general health was quite good up to last fall (1882). The menstrual flow had ceased about a year prior to that time.

It was about October (1882) that she first complained of feeling badly—suffering from fullness in the epigastric region, with nausea after eating; bowels constipated. She did not go to her work regularly, but sat about the house and complained of feeling languid and tired. She did not take her bed, however, until about the middle of January (1883), which she kept till her death, which occurred on May 13th, 1883. She was much weakened, but did not complain of any pain until the early part of February, when she commenced to suffer with pain in the small of the back, with fullness in the epigastric and right hypochondriac regions with some swelling visible. She had nausea after eating, though her appetite was good, and continued so until a few days before her death. Jaundice became marked twice during her illness, but remained only a few days each time. A few days, possibly a week, before death, the jaundice became very intense and remained so. About ten days prior to death her left leg became cold and swollen; this was never relieved. She complained of heat around the chest, with cold sweats; urine was high-colored, but passed freely, and in good quantity; at times there was incontinence. The night of her death, she suffered greatly with pains in her back. She died of exhaustion.

The above history I have collected from the statements of the husband and friends of the subject, and it has been

* This paper was prepared for the session of the Medical Society of Virginia, but was not presented for want of opportunity. The author has kindly favored the Editor by contributing it to the pages of the *Medical Monthly*.

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confirmed by Dr. John Lewis, whose patient she was. I did not see the patient during life.

The *post mortem* examination was performed by Dr. Hugh T. Nelson and myself. We found the subject to be a female about forty-five years of age, apparently about five feet, four or five inches in height, a bright mulatto and greatly emaciated.

Upon examination, we found the abdomen greatly distended, the skin, however, being quite flabby, and there could be felt beneath a large, irregular tumor, extending downward to about an inch below the umbilicus. On the right side, and seemingly adherent to the costal cartilages above, about two inches above, and two inches to the left of the umbilicus, there was a deep notch several inches in depth, which separated the main portion of the tumor from a portion on the left, which I mistook for the spleen, greatly enlarged. This, however, afterwards proved to be the left lobe of the liver. The spleen was normal. There being evidently some dropsical effusion in the abdominal cavity, we introduced the trocar and drew off about a gallon of clear fluid, which contained a slight tinge of biliary-coloring matter. We next proceeded to open the abdominal cavity, which we did in the usual manner. The anterior abdominal wall was found to consist of nothing save skin, fascia and peritoneum, the abdominal muscles having been entirely absorbed. Lying just beneath the abdominal walls was a large livid mass, which stretched away to either side, and entirely filled the upper half of the abdominal cavity and extending downward to within a few inches of the symphisis pubes, presenting to our astonished eyes the most gigantic specimen of a liver that we had ever dreamed of. We next proceeded to examine the rest of the viscera. The stomach was pushed backward and to the right, and was entirely out of sight, nothing being visible in the cavity but the upper surface of the two lobes of the liver, the transverse colon and the small intestines. Upon dissecting out the liver we examined the rest of the viscera. The spleen were found to be about normal, both in regard to size and position. The pancreas seemed to be slightly enlarged. The kidneys appeared to be normal, so they were not disturbed. The uterus and ovaries were normal.

The only thing which drew our attention was the appearance of the mesenteric glands, which were enlarged, and the whole mesentery was congested. These glands varied in size from a pin's head to that of a large pea and of a dark-

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brown color. The lungs were found to be of a dark-grey color, much compressed. The heart was slightly enlarged, but otherwise normal.

The *liver* itself was one of the most interesting pathological specimens which it has ever been my pleasure to see. As it lay on the floor, resting on its inferior surface, it had somewhat the appearance of a pair of lungs which had been inflated. Its weight was *seventeen and one-half pounds.* It measured twelve inches transversely, eleven inches anteroposteriorly, and six inches from its superior to its inferior surface. These dimensions, thus stated, fail to convey to the mind an adequate idea of its enormous size as the thickness (six inches) remained the same to within three inches of the anterior border, which then sloped off until it was not more than one inch thick at the edge. It may give you some idea of the size when I tell you that it nearly filled a common tin slop-tub. Its color was a dark-red, and its surface was dotted with irregularly, circular white spots of cancerous tissue, the largest measuring from one and a-half to two inches in diameter. They were usually umbilicated.

Dr. John Lewis, who had had charge of the case, kindly gave me the specimen, which, after thoroughly examining, I presented to my friend and former Professor of Anatomy, Dr. John Staige Davis, of the University of Virginia, who has placed it in the Medical Museum of the University. On account of its uncommon size and its interest as a pathological specimen, I have taken some trouble to investigate the subject of large livers, and as far as I have been able to ascertain, it is the largest liver now on record. Budd, on Diseases of the Liver (p. 416), mentions a case, which died on May 25th, 1855, in which the liver weighed nine pounds four ounces (9 lbs. 4 oz.).

Dr. Huger, of Alabama, in *Charleston Medical Journal*, for April, 1874, reports a case in which a cancerous liver weighed fifteen pounds ten and a-half ounces (15 lbs. 10½ oz.).

Aside from these two cases, I can find nothing in the records, either of Europe or America, which can compare with the present specimen, and I think I am justified in believing that it is the largest liver, cancerous or otherwise, which has ever been presented to the medical world.

Alcohol has been truly called the "genius of degeneration."

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A Case of Pelvic Abscess. By C. C. DUFFY, M. D., Norfolk, Va.

In the summer of 1877, I was called to see a patient at 10 o'clock P. M., living on Mr. P's farm, about six miles from Newbern, N. C. I immediately responded to the call, and, on arriving at the house, examined the patient, and found her suffering excruciating pain in the lower half of the abdomen, and to such an extent that it was impossible to make a diagnosis, the pain being so great that the slightest touch would bring forth a scream of agony.

At the same time I found her temperature high, pulse excited, great congestion about the liver, constipation, backache, headache, etc. I put her on opiates and alteratives, and ordered a dose of castor oil to follow in the morning, and her back to be rubbed with spirits of turpentine.

Next day, towards noon, I went again to see her. She was resting easily from the effects of the opiates; the alteratives had relieved the congestion of the liver; the oil had moved her bowels very nicely, and her general nervous condition was greatly alleviated.

I made a vaginal, rectal and abdominal examination, and found a collection of pus extending from above the base of the uterus to below the apex and between the uterus, vagina and rectum.

I at once decided that she had pelvic abscess, as a result of hæmatocele, and I put her on iodide of potassium, iron, quinine, veratrum viride, morphine and bromide of potassium, and ordered another dose of oil to be given the following morning.

Next day, armed with one of Dieulafoy's aspirators, I went out to see her, and found her as comfortable as her condition would allow.

Explaining to her the nature of the operation, I got the instrument in position and passed the hollow needle up the rectum, guiding the point with the index finger of my right hand, and I introduced it into the lower part of the sac. I then turned the stop-cock, and drew off nearly seven ounces of dark grayish looking matter. After the needle was withdrawn I emptied the contents of the instrument into a cup, when the odor arising from it was so great and so offensive that it filled the entire house with its stench in a much shorter time than it takes to tell it. I immediately had the house ventilated by opening all the doors and windows, and had the cup moved out, as the smell was more offensive than anything that I had ever experienced.

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I ordered the treatment to be continued, leaving the patient expressing herself as feeling relieved. I went out next day to see her, and on making an examination of the parts, found that only the lower half of the contents of the sac had been withdrawn, and that the upper part was there yet and beyond reach through the rectum. The walls of the lower half were thoroughly contracted, giving the upper half more the appearance of having ascended into the abdominal cavity, and feeling rounded in shape.

I decided that it would have to be drawn off at all hazards, for if it remained there it would probably break through into the abdominal cavity, causing peritonitis, or be absorbed, producing septicæmia. I ordered the treatment to be continued, and returned to the city.

Next day, rather late in the afternoon, I reached the patient, and after making a final examination, I decided to pierce the wall of the abdomen, that being the only way out of the difficulty that I could see. The point of entrance selected was at the end of a line about an inch long drawn at right angles, downwards and inwards, from the centre of a line drawn from the umbilicus to the anterior superior spinous process of the ileum. The preliminaries being arranged the skin was drawn from below upwards, and with a sharp-pointed bistoury, a hole was made so as to leave, after the operation, a closed wound. The needle was then introduced backwards and inwards for several inches, and the stop-cock turned, when the contents of the sac were emptied into the aspirator. On examination it was found that we had drawn off as much matter as at the former operation, and that there was no difference in its character, the patient expressing herself as much relieved, and feeling as if a load had left her.

A continuation of the treatment was ordered, with an addition of fl. ext. of ergot to aid in the contraction of the tissues about the uterus, and the patient recovered in a comparatively short while, completely restored to health.

What would have been the final result of this case without the benefit of our surgical knowledge, we are not able to judge, but think the prognosis would undoubtedly have been unfavorable.

I saw Mr. P. five years after this attack, when he told me the patient had been well ever since; at work all of the time in the field, and doing such other work as is usually done by women on the farm, with the exception of a slight attack of intermittent fever.

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Proceedings of Societies.

MEDICAL SOCIETY OF VIRGINIA.*

FIRST DAY—EVENING SESSION—*September 4th.*—The Fourteenth Annual Session of the Medical Society of Virginia, convened at Rockbridge Alum Springs, Va., at 8:30 P. M. This renowned health and summer pleasure resort was selected as the place for the present meeting, in acceptance of an invitation from Col. Frederick Effinger, the President of the Springs Company. The attendance was about one hundred physicians from this State, besides some distinguished gentlemen from other States, prominent among the visitors being Drs. L. McLane Tiffany, Dean of the University of Maryland, John N. McKenzie of Baltimore, and Julian J. Chisolm of Baltimore.

A band of music enlivened the occasion of the assembling, and many ladies, besides hosts of the male guests of the Springs' Hotel favored the Society by their attendance.

Dr. Wm. D. Cooper, of Morrisville, Va., President of the Society, occupied the Chair.

After prayer by Rev. Dr. J. J. Lafferty, the next order of business was announced to be the

Annual Address to the Public and Profession, by Dr. J. E. Chancellor, of the University of Virginia. After stating that by the request of the manager of the Springs, and as a former resident physician on these grounds, he welcomed the Society and urged the members to enjoy the pleasures which might be found here, Dr. Chancellor then announced as the subject of his address, *Mineral Waters*. He reviewed the history of mineral water from the earliest times down to the present, and then after defining what a mineral water is, he proceeded with an exhaustive discourse upon the formation of such waters; their chemistry and composition, the geological character of the soil which produces them, where they are likely to be found, and their classification, and their importance as medicinal agents, closing his address by a comparison between natural and artificial mineral waters, and demonstrating the fact that the latter can never equal or

* We find the special reports given in the *Medical News*, of Philadelphia, of September 15th, 22nd, and 29th, 1883, so well prepared for our purpose that we adopt them for the *Virginia Medical Monthly*.

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take the place of the former. The address was warmly received by both the public and profession, and is an important contribution to the literature of the subject.

After some formal business the Society adjourned.

SECOND DAY—MORNING SESSION—WEDNESDAY, *September 5th.*—After the meeting had been called to order at 10 A. M., and the minutes of yesterday were read and approved, Dr. G. Wm. Pollard, of Aylett's Va., acting chairman of the Committee on Applicants for Fellowship, presented his report. Some thirty-eight or forty new members joined during the session.

The President next appointed thirteen Fellows, representing different sections of the State, a committee to *nominate officers* for the ensuing term.

At the hour of 11 A. M., the special order of business being the

PRESIDENT'S ADDRESS, Dr. Wm. D. Cooper proceeded to deliver it—after inviting Vice-President Dr. Meade C. Kemper, of Goshen, Va., to assume the chair for the time. His subject was the *Individual Rights of Physicians, and the Limited Protection afforded them by our State Laws, with Suggestions as to Some Action of Redress.* It was an excellent address, clearly defining the rights of doctors to claim special legislation to enable them to perfect themselves in scientific studies, so as to be more serviceable to the people, while at the same time they may protect themselves against the encroachment of quackery, charlatanry, etc. The power of thorough organization and determined effort were well pointed out.

The next order of business was the report on advances in different departments of medicine.

Report on Advances in Anatomy and Physiology.—Dr. Jno. R. Wheat, of Richmond, Va., Reporter. This paper showed careful study of the subject in hand.

Report on Advances in Chemistry, Pharmacy, Materia Medica, and Therapeutics.—Honorary Fellow and ex-President Dr. A. M. Fauntleroy, of Staunton, Va., Reporter. Chemistry, since Sertürner, over fifty years ago, announced the discovery of morphia, has played an important *rôle* in medical progress. In the last few years, *actinium* has been separated in the metallic state. *Liquefaction of ozone* has been accomplished by compressing ozone in oxygen, and the indigo-blue drops have been preserved for nearly thirty minutes. The probable existence of active allotropic nitrogen was referred

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to. Ammonia from the atmosphere may be obtained by deodoxidizing the air by coal dust, in the presence of watery vapor, at red heat. Common salt is put in the furnace with the coal; liberated chlorine combines with the nascent ammonia, forming ammonium chloride. Artificial indigo, by synthesis from a benzine nucleus, is an industrial chemical triumph, for colorless propiolic acid, when treated with a reducing acid, yields indigo blue.

Apomorphia, the reporter has repeatedly witnessed as an abortive of epileptic seizures, and as a calmative in cases of acute mania. This suggestion is valuable, since it comes from a reporter who has had years of experience with brain and nervous disorders, as former medical superintendent of the largest insane asylum in the State. He recommends it to be used hypodermically. The conversion of morphia into codeine, by chemical processes, was referred to, and the phenyl character of morphine, he thought, seemed established. Under the heading of constitution of atropine and its derivative products, tropic acid, tropine, and homatropine, were mentioned, and the mydriatic effects of the latter agent referred to. Hyoscine was spoken of therapeutically as a surer agent than atropia. It is also valuable in whooping-cough, asthma, and epilepsy. The alkaloids of cinchona, and its derivative products, were next considered. Chinoline salicylate and tartrate were mentioned chemically, and the synthesis of thymol and resorcin was the last reference made to the chemical department of the subject.

Glucose as an excipient of pill masses was specially commended, as well as nitre tablets for asthma and insomnia. Solution of morphia in boiling water for hypodermic use, was the next topic. Compressed disks for hypodermic use were mentioned. Colorless tincture of iodine was referred to cosmetically. Several agents were referred to as deodorizers of iodoform, none of which was so highly commended as Tonka bean. The use of chloral hydrate as a vesicant—long ago suggested—is now put forth as an established success. The chloral is sprinkled on adhesive plaster, and applied to the flesh while warm. In about ten minutes the part is free from pain, but blistered as effectually as if by fly-blister.

Jamaica dogwood blunts pain and promotes sleep, and was recommended as particularly valuable where opium cannot be used. Dr. Fauntleroy has given it successfully in facial neuralgia. It is best given with milk. Rhamnus purshiana, Cascara sagrada, as a tonic aperient for infantile indiges-

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tions, etc., were referred to. Convallaria maialis as a cardiac stimulant, and its therapeutical application as the rational outcome of its physiological action, were mentioned to. It is considered perfectly safe.

Report on Advances in Obstetrics and Diseases of Women and Children.—Dr. M. G. Ellzey, of Washington, D. C., Reporter, stated that he had assigned the report on Diseases of Children to Dr. Wm. H. Coggeshall, of Richmond, reserving the other two branches of his subject for himself.

Obstetrics.—He said that the advanced state of the science of obstetrics precludes the expectation of brilliant and revolutionary advances. There are perhaps no advances more important than the general observance of the principles of the Listerian surgery in obstetric practice, and the general recognition of the scientific validity of the so-called germ theory of disease. Among the menacing perils of child-birth, eclampsia, post-partum hæmorrhage, and placenta prævia still stand forth formidably prominent. The possibility of the production of embolus by styptics—especially preparations of iron thrown into the uterine cavity—was referred to. The abuse of forceps was strongly condemned. No man has a right to terminate a natural labor by force, and whosoever uses forceps to gain time for himself is guilty of a criminal assault.

Diseases of Women.—The recent activity of gynecologists has been so great that it seems hard to select particular advances as worthy of the particular attention of the general practitioner. The reporter strongly condemned the abuse of pessaries, and the making of vaginal explorations of married and unmarried females upon trivial grounds, and protested against the growth of pretended specialism in practice, as in many cases a mere bold system of advertising quackery; condemning also promiscuous resort of women of all ages and ranks to hospitals and specialists for every real or fancied ailment, for the diagnosis and treatment of which every reputable practitioner is, or ought to be, perfectly competent. The reporter dwelt earnestly upon the deplorable results of the abuses which, it is much to be feared, are gradually becoming to be tolerated in medical circles, in the general treatment of uterine disorders.

Dr. Wm. H. Coggeshall, of Richmond, Va., read the report on **Advances in Diseases of Children**, in the course of which he made special mention of congenital phimosis, and its treatment. He made protest against the indiscriminate performance of circumcision in cases where true stenosis is

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absent, as in many such instances the condition may be relieved by the employment of a little dexterity on the part of the surgeon. He also advised against the too common employment of chloroform in convulsions, and referred to the favorable mention by later writers of nitrite of amyl inhalations for the relief of this affection. Reference was made to the remarkably successful results obtained last year by Dr. Macguire, of New York, in the treatment of cancrum oris by subnitrate of bismuth. He gave the treatment of the commoner forms of children's diseases as employed in the New York hospitals for children, closing with a strong recommendation of the fluid extract of ergot for employment as a systematic treatment in pertussis, from his personal experience.

After the reports had been read, Dr. Gabriel McDonald, of Union, W. Va., expressed the opinion that Dr. Ellzey had given a too narrow range to the use of the forceps. In natural labor, Dr. McDonald, when everything is all right as to dilatability of os and position of head, relative sizes of mother's parts, etc., and the pains are affecting no good, applies the forceps. He thinks it cruel to let the mother suffer so long when she can be relieved by the instruments.

Dr. Hume Field, of San Merino, Va., asked if he gave chloroform?

Dr. McDonald replied that he first applied the forceps, then chloroformed, and then delivered.

AFTERNOON SESSION.—The afternoon session was entirely devoted to the

Election of Officers for the Ensuing Year, which resulted as follows:

President.—J. Edgar Chancellor, M. D., of Charlottesville.

Vice-Presidents.—Drs. S. B. Morrison, of Brownsburg; P. K. Graybill, of Amsterdam; Bedford Brown, of Alexandria; Samuel K. Jackson, of Norfolk; J. M. Estill, of Tazewell C. H., and Thos. J. Pretlow, of Jerusalem.

Recording Secretary.—Dr. Robert G. Cabell, Jr., of Richmond.

Corresponding Secretary.—Dr. Hugh M. Taylor, of Richmond.

Treasurer.—Dr. Richard T. Styll, of Richmond.

Executive Committee.—Drs. W. W. Parker, of Richmond, Chairman, and Honorary Fellows, Harvey Black, F. D. Cunningham, J. Herbert Claiborne and Samuel C. Gleaves.

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Committee on Nominations.—Drs. Geo. Wm. Pollard, of Aylett's; Lewis Wheat, J. Philip Slaughter, Wm. D. Hooper and Hugh T. Nelson.

Committee on Publications.—Drs. E. T. Robinson, C. W. P. Brock and George Ross, all of Richmond.

EVENING SESSION.—Dr. Thos. J. Riddell, of Richmond, Va., moved that the Committee on Publications be instructed to have the forthcoming volume of *Transactions* published separately from any medical journal.

Dr. L. B. Edwards, in seconding the motion, took occasion to speak commendably of the *Atlantic Journal of Medicine*, edited by two members of this Society. Carried.

Under the call for scientific papers, etc., Dr. Thos. H. Howard, of Floyd C. H., exhibited a vial containing eleven hundred fragments of bones which he had removed from the ear of a woman aged 46 years. She had dreamed some years before that when eleven hundred pieces were removed, she would pass no more fragments. He thought it probable that they were the result of a fracture of the external plate of the skull. He stated that the time occupied in removing the fragments was four years.

The general sentiment of members of the Society who examined the fragments was that many of them were not bones belonging to the human race, and that it was a case of deception by a hysterical patient.

Dr. M. G. Ellzey, of Washington, D. C., presented a volunteer paper on the

Therapeutic Value of the Rawley Springs, Va. He stated that the Rawley water is an alkaline chalybeate, the iron existing as carbonate of the protoxide, held in perfect solution by excess of carbonic acid, with which the water is supersaturated as it escapes at the fountain. No other water containing iron in this form is known elsewhere in America; but the Rawley water is nearly identical with the celebrated waters of Spa, Schwalbach and Tunbridge Wells. An analysis of the water by Prof. J. W. Mallet was given, and from the analysis the therapeutic uses of the water may be deduced. The springs are delightfully situated in the midst of the North Mountains, near Harrisonburg, in Rockingham county, Va. The summer climate of the Appalachian hills of Virginia is nowhere surpassed in the entire world. Rawley water is a prompt and most efficient diuretic, closely resembling in the character of its alkaline ingredients the celebrated Buffalo Lithia water. From its supersaturation with car-

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bonic acid, it acts like champagne in quieting the vomitings of hysteria, pregnancy and chronic debauch, and for anæmia and impoverishment of the blood, from whatever cause, in all ages and both sexes, it surpasses in efficacy every preparation of the apothecary.

Dr. L. B. Edwards moved to refer all papers thus far read to the Committeee on Publication. Carried.

Adjourned.

THIRD DAY—MORNING SESSION—THURSDAY, *September 6th.* After the routine work of registering, reading minutes of the preceding day, etc., invitations to places at which to hold the next annual session were presented.

On motion of Dr. W. W. Parker, Rawley Springs, Va., was selected as the place of the next annual meeting, in acceptance of the invitation from the Springs Company, who promise to make no hotel charge to doctors and fraternal delegate who may visit the session.

The Treasurer, Dr. L. B. Edwards, presented his report, which showed a balance of $39 to the Society's credit, and without any outstanding indebtedness. Upon his motion, an auditing committee was appointed by the President, to examine into his accounts and report as early as practicable.

The Report of the Recording Secretary.—Dr. Edwards, as the retiring Recording Secretary, also presented a report, showing that with all the resignations, deaths, members dropped from register, etc., the total membership this year had increased to over 450.

Under calls for papers from fraternal delegates, Dr. Julian J. Chisolm, of Baltimore, fraternal delegate from the Medico-Chirurgical Faculty of Maryland, read one on

How to Remove Foreign Bodies from the Ear. He alluded to a common error of belief among the laity, that the ear opens directly into the brain. He mentioned a large number of the foreign bodies that may enter the ear cavity, and described the form of the cavity itself. After suggesting that the physician should always examine for himself to see that a foreign body is really in the ear, and to discover its nature, he referred to the method of examining the cavity by means of a speculum, a reflecting mirror, and a good light, etc., he cautioned against mistaking certain natural conformations for foreign bodies. He then remarked that, usually speaking, certain foreign bodies may remain indefinitely in the ear without injury, and in many cases without inconvenience. To remove an insect, necessarily an air-breathing

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animal, he recommended to drop in the ear some bland olive oil, which speedily destroys its life, and to follow this up by the use of the ear-syringe with warm water, and the foreign body will soon be washed out. He cautioned against the use of forceps by the inexperienced physician. The true object of his paper was to urge upon physicians the use of the ear-syringe, and a stream of warm water as the all sufficient means for removing foreign bodies from the auditory meatus. "I have never seen a case of foreign body in the ear, not tampered with by others, that I have failed to extract by the syringe." It is in the *persistent* use of this simple and innocent means that the object is finally attained. The syringe should hold from one to two ounces, and be easily worked by one hand. If the foreign body be vegetable in kind, use alcohol instead of water, as alcohol has the power of shrinking vegetable matter swollen by moisture. First, cleanse the ear of all purulent secretions, then fill the aural passage with alcohol, inserting a plug of cotton at the external meatus to prevent its escape. It can do no harm to let it remain there all night. After the soft seed in the ear has been shrunken by soaking in alcohol, its removal by the stream of water will be much expedited. When the necessity arises for the removal of a foreign body, and when these means fail of success, it is safer to send the patient to a specialist who is at least apt to be more dextrous in the use of ear instruments than the general practitioner.

Dr. J. St. Pierre Gibson, of Staunton, Va., exhibited

Suspensory-Extension Splints for fractures of the upper and lower extremities, illustrating their application by "putting up" a man who acted as a patient. The name of the splints indicates the principles upon which they act.

Plastic Surgery of the Face.—Dr. L. McLane Tiffany, a delegate from the Medical and Chirurgical Faculty of Maryland, presented a paper on this subject. He made no attempt to treat the subject exhaustively, but considered the general principles only. The subject was divided into three heads: 1st. Measures for the restoration of parts congenitally at fault, either by excess or deficiency. 2d. Measures for the restoration of parts deficient in consequence of accident or disease. 3d. Measures for the correction of deformity due to cicatricial contraction, a class usually associated with the preceding. The first class differed from the others in several respects, principally because the edges of the deficiency were healthy, and because similar deformities being often seen, opportunities were afforded for perfecting operative

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measures. The latter two classes comprised cases in which much scar-tissue was an essential element, and differed greatly the one from the other in locality and shape, similar lesions being very rarely seen. The anatomical composition of the face was alluded to, attention being directed to the great mobility of the features.

To remedy a deficiency comprised,

1. Obtaining a piece of tissue to fill the vacancy and preparing its bed.

2. Putting it in position and nourishing it.

3. Filling the vacancy resulting from transfer.

4. Ultimate result as regards usefulness and appearance. Skin similar to lost skin should be always sought for; scar-tissue was to be rigorously excluded, and a flap taken much larger than the space to be filled. Primary union was to be attempted; this failing, union by granulation was to be sought for. Incisions should follow natural furrows and be out of sight when possible. The flap was to have a broad pedicle without twisting if possible. Packard's suggestion of cutting skin obliquely was referred to favorably. Hæmorrhage was to be arrested by hot water and pressure. Granulating surfaces were to be dressed with iodoform and cotton. Quill suture is to be used, passed very deeply, and edges lightly held together by fine wire. Operations should be preceded by an injection of morphia under the skin. Preparatory treatment is generally required.

In operations about the mouth (inside), the patient should lie supine, the face towards a window, horizontal, and the thorax projecting beyond the table supported by assistants at each shoulder, so as to allow the blood to flow from the mouth and not towards the larynx.

Deflection of the Nasal Septum and its Treatment.—Dr. John N. Mackenzie, a delegate from the Medico-Chirurgical Faculty of Maryland, of Baltimore, after some preliminary remarks on nasal obstruction, and the unsatisfactory manner in which the subject of deflection of the septum had been heretofore treated, proceeded to comment on the frequency of the deformity, the dependence of the form of the external nose upon corresponding peculiarities in the septum, and the influence of national custom in the production of asymmetrical conditions of the cartilage. Deflection is most frequently observed in youth and manhood, is more common in males, and occnrs as the result of the changes in the skeleton of the face that accompany the processes of old age. Attention was called to an inherited proclivity to deflection.

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The deflection may be congenital or acquired; in the latter case it may result from traumatism, or occur as the sequel of a pathological process. He laid special stress upon asymmetrical conditions of the nasal fossæ as a cause of septal deflection, and the possibility of the occurrence of the accident during difficult parturition. The frequent introduction of the finger into the nose, and the cleansing of the organ with the hand were next commented on. Tumors of the nasal and accessory cavities, hypertrophied states of the turbinated bodies etc., diathetic diseases (rickets, syphilis, osteomalacia, etc.) were also given as causes of deflection, and as a matter of historical interest, the theories of Quelmalzius were referred to. Dr. Mackenzie then gave a detailed and minute account of the anatomical part of his subject, and a description of the different varieties of the malformation based upon his anatomical and clinical observation. He insisted upon the influence of the deformity in the production of throat and middle-ear disease, and indicated the pathological processes which follow as the natural results of the deflection. In connection with this part of the subject, he called attention *to the production of throat and aural disease through the reflex agency of the vaso-motor and trophic nerves*, the primary irritation originating in the turbinated tissues of the nose, and probably from the reflex sensitive area which he had shown to exist in these organs. Passing from diagnosis to treatment, the rational management of the case will vary with the nature and situation of the deflection. The operations with the galvano-cautery, knife, snare, resection, Adams' operation and its modification, the procedure of Blandin, the removal of portions of the septum with the revolving burr of the dental engine and the metacarpal saw, and the suggestion of Dr. Delavan to remove the middle turbinated bone of the *unobstructed nostril* were commented upon, and their relative merits discussed. The operation generally known as "Steele's," viz., triangular division of the cartilage, Dr. Mackenzie showed to have been performed by Dr. Jas. Bolton, of Richmond, eleven years before the appearance of Steele's article. He thought, therefore, that the operation should be known as "Bolton's," and Steele's procedure as a modification of the Bolton operation. To retain the septum in position after operation, Dr. Mackenzie suggested *the use of rubber bags* introduced into the nostrils and inflated, as less liable than other forms of plugs to produce irritation, and as a means of securing uniform pressure. These bags can be mounted on a central canula, after the

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manner of the well-known rubber tampon for epistaxis. In certain cases of deflection of the bony septum, he recommended as a substitute for operation on the septum itself, *removal of the turbinated bone of the obstructed nostril*, and related a case where he had successfully performed the operation.

A vote of thanks was given to each of the three visiting delegates for their instructive papers, copies of which were requested for publication.

Dr. Joseph A. White, of Richmond, Va., exhibited some *Instruments for Use in Deflected Nasal Septum;* also a specimen of a *Foreign Body Removed from a Patient's Nose.*

The Auditing Committee reported that the accounts of the Treasurer were correct, and upon their motion $25 were voted to reimburse, in part, Dr. Edwards for advances he has made for the Society's interests.

After the installation of the newly-elected officers, Dr. Samuel K. Jackson, of Norfolk, Va., read his

Report on Practice.—After alluding to the reproach "That there is so little certainty in the practice of medicine as to allow the proverbial differences of opinion between practitioners," he announced as the subject of his paper "The advances that have been made towards securing a true scientific basis."

Though Prof. Huxley has dated the rise of medicine back through some eighty generations, scientific medicine can hardly be traced further back than the discovery of oxygen. This is the true era, which occurred but a little while before the career of the oldest among us; so that it has all been built up in our very lifetime. Before that but few of the functions of the animal economy could be understood. Physiology could make but little progress until the development of the fundamental science of chemistry.

The new theory of evolution has done much by informing us how our growth and development has been affected by our surroundings, and the young science of biology has conferred a great benefit by showing how diseases are occasioned by organisms which prey upon living beings, as well as the conditions favoring the attacks of these predatory parasites, and also the necessity, as well as the means, of destroying them. It also has shown us how nature attempts to preserve the health and life of both animals and plants excreting the products of parasitic life, and also by providing ingredients poisonous to the parasites. In this way plants furnish us with some of our most valuable germi-

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cides; and a careful and extended study of them may furnish us with other, and, may be, still more valuable and destructive means than any we now possess. Though quinine is the most valuable antidote we yet know of, for the malarial poison, that it is the only one or the most efficacious one to be found in nature, is preposterous, or that it is the only germicide equally powerful in all zymotic diseases is unphilosophical in the extreme.

We have reached the point now where it has become necessary to study the minute differences between germicides to ascertain precisely which are most efficacious in the various diseases of parasitic origin. Thus by the germ-theory of disease, the whole treatment of zymotic disease has been revolutionized.

Before these recent discoveries we unconsciously made use of some germicides without knowing how they proved efficacious. Mercury had long been used for the destruction of epizoæ, but when we administered it internally, it was never supposed that it was for the purpose of destroying entozoæ. We can *now* understand its power in the suppurative processes. The use of this valuable agent was one of those stumblings on the truth, of which we have many examples. In selecting our germicides we are furnished with a key by Mr. Law, which, as far as is known, he was the first to enunciate on this floor—viz., that "no organism can live in its own excreta, that the products of its life-processes become poisonous to it, stop its ravages and destroy its life." If this be true, we have only to saturate it with its own exhalations. We know how efficacious this is when carbonic acid is the exhalation; when it is alcohol; when it is ammonia, as in typhoid fever; when it is sulphuretted hydrogen, as in some cases of indigestion. The examples might be multiplied indefinitely.

He announced it as his belief that it is only as a germicide, an antidote, that we use quinine, without any reference to its therapeutical or physiological powers; that these, about which there is such difference of opinion, are ignored and disregarded, and we use it in any condition of the system in spite of them.

The time devoted to the symotic phase of the subject prevented an extended notice of the treatment of diseases due to a chemical fault, the results of which are as certain as chemical reactions themselves. He considered that a great advance had been made by Koch's discovery of the bacillus tuberculosis, notwithstanding the efforts of Dr. H. F. For-

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mad, of the University of Pennsylvania, to disparage them. We have many formations analagous to the tubercle among animals as well as among plants of undoubted parasitic origin, which renders it highly probable that this abnormal formation is due to a like cause.

We already begin to see results from these advances, in the interest manifested in sanitary science, in State medicine, in the establishment of health boards, in the stamping out of epidemics, or in depriving them of their virulence, in the lessening of disease, and, finally, in diminishing of death-rate.

Though some striking figures could be furnished from private practice to substantiate these assertions, for fear of a misinterpretation of motive they will not be produced, but only those furnished by the army and navy will be made use of for this purpose.

In the army the numbers on the sick-list diminished from 18.63 to the thousand of mean strength in the year 1871 to 15.13 in the year 1881 (white troops). In the whole army, both white and colored, from 18.04 in the year 1871 to 15.36 in the year 1881.

The number of deaths from disease, per thousand cases treated, declined from 6.78 in 1871, and 7.22 in 1872 to 4.32 in 1881, being as low as 3.75 and 3.97 (colored) in 1877.

The number of deaths per thousand of mean strength declined from 12.13 in 1871 to 6.64 in 1881, about one-half. Though the navy reports do not show such a decline in the number of cases treated, they show equally as favorable results in the cases actually treated.

In the year	1875	there were	627	cases	treated to	1000 men.
"	1876	"	561	"	"	"
"	1877	"	687	"	"	"
"	1878	"	702	"	"	"
"	1879	no report.				
"	1880	there were	990.87	"	"	"
In the year	1875	there were	3.84	deaths	to 1000	men.
"	1876	"	2.51	"	"	"
"	1877	"	2.35	"	"	"
"	1878	"	4.61	"	"	"
"	1880	"	2.94	"	"	"

Deaths to the one thousand cases treated declined from 6.11 in 1875 to 2.74 in 1880.

The city of Norfolk furnishes further proof of the value of medical practice, by the diminution of the death-rate after the restoration of an appropriation for medicines for

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the poor, which had been withdrawn for three years, which, as a consequence, were three years of very heavy mortality. During those three years the work of the irregular practitioners was very much increased, as they supplied their own medicines. Their losses were enormous, notably in cholera infantum and diphtheria.

We conclude, then, that we are not spending our energies on the baseless fabric of a vision, that we are not imposing upon the public a myth, the product of a distempered brain, but that the noble art to which we are devoting our time, our talents, and our energies, is the outcome of a sound philosophy built upon sciences, the principles of which have been evolved by the highest modern cultivated intellects.

AFTERNOON SESSION.—Dr. Wm. D. Cooper, of Morrisville, Va., the retiring President, was duly elected an *Honorarg Fellow of the Society.*

Dr. Wm. C. Dabney, of Charlottesville, Va., read a paper entitled

The Present Aspect of theBacillus Tuberculosis Question.—He reminded his hearers that bacilli have been found in many other places than in tuberculous cavities. His conclusions may be summarized as follows:

1. The bacilli observed by Koch in the sputa and tissues of tubercular patients, and considered by him the essential cause of tuberculosis, are not peculiar to this disease, but are found in a number of other diseased conditions, and even in some of the discharges of healthy persons.

2. It is probable that they make their appearance in the caseous masses subsequent to their formation, these masses furnishing a suitable soil for their growth and multiplication.

3. Experiments made with "indifferent substances," and the still stronger evidence furnished by the experience at the Brompton Hospital, render it highly probable that the bacilli are not the primary and essential cause of the disease.

4. The inoculation-experiments of Koch are not conclusive, because they were made chiefly on animals in which any irritant is liable to set up a caseous inflammation, the caseous matter thus formed furnishing a suitable nidus for the development and growth of bacilli, and being capable of producing tuberculosis by inoculation (whether owing to the presence of bacilli or not is unknown as yet).

5. It is probable that the presence of the bacilli in the lungs, or rather, diseased organs, may hasten the advance of the morbid process.

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Dr. Chas. M. Shields, of Richmond, then presented his report on the

Advances in Ophthalmology, Otology, and Laryngology, of which the following is an abstract.

The relation of diseases of the general system to some forms of eye trouble was first considered, mention being made of the several forms of choroidal trouble due to uterine desease: malarial hemeralopia, and the effects of pernicious anæmia on the retina. In the progress of the physiology and anatomy of the eye, the amount of albumen in the aqueous was stated to be .03; and attention called to the discovery by Giacomini of cartilage in the semilunar folds of the negro, and its absence in the white race. In connection with the subject of *sympathetic ophthalmia*, he alluded to the investigation of Krause, who found that in eyes in which neurotomy had been performed, the cornea again became sensitive and the ciliary nerves reunited; from which he drew the conclusion that unless the patients could be kept under occasional observation, enucleation should be performed instead of neurotomy, when circumstances call for one or the other.

Trituration of the cortex of the lens to hasten the development of cataract, was found successful by Forster, of Europe, and Mettendorf and others of this country, it being performed by kneading the lens by pressure on the cornea with a cataract-spoon after an iridectomy, and while the anterior chamber was empty. The recently suggested use of eserine in iritis was favorably commented on, i. e., to employ it to reduce the vascularity of the iris, while mydriasis was still kept up with atropine. He favored its use, too, in, episcleritis. The method of M. Badal of stretching the episcleritis nasal nerve in the treatment of glaucoma was mentioned, as was eserine also, but the advice was given of keeping the patient under observation after the use of either, and to resort to iridectomy at first if the patient could not be occasionally seen. Eserine has proven useful in hemeralopia, peripheral ulceration of the cornea, and hydrophthalmus. The use of the *electro-magnet* in removing foreign bodies from the vitreous and lens was referred to, and the employment of galvano puncture in detachment of the retina. *Jequirity* has been found useful in granular lids, in the form of an infusion; 32 of the powered seeds are added to 1,000 grammes of water. The infusion when painted on the lids, produces a mild form of purulent ophthalmia. On the healing of this, the granulations are usually found to be cured. He exhibited some samples of this agent. *Hydrobromate of homatropine* was

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advised for dilating the pupil for ophthalmoscopic purposes, its effects lasting for a shorter time than any of the other mydriatics. Nitrite of amyl in quinine amaurosis, boracic acid in granular lids, and iodoform in croupous conjunctivitis were mentioned.

Taking up *Otology and Laryngology* he referred favorably to the use of sulphide of calcium in otitis externa and furuncles of the meatus, also in mastoid disease. A *résumé* of an interesting report by Dr. E. Weil, of Stuttgardt, showed a much larger percentage of school-children effected with ear disease than was generally supposed to be the case. Speaking of the method of removing foreign bodies from the ear, he said that over eighty per cent. could be removed with the syringe, and if swollen, the addition of alcohol would cause them to contract. If the syringe fails, then the blunt hook or forceps are to be used under good illumination. A case of transient poisoning from instillation of a solution of atropine in a healthy ear for earache was reported. The "dry method" of treating otorrhœa was considered and mention was made of the use of the finger in the diagnosis of post-nasal disease. In post-nasal and nasal catarrh he advocated the use of insufflations of nitrate of silver and calcined magnesia, as suggested by Schelle; the proportions 1 to 15, 1 to 10, 1 to 6 being the most useful. Most cases of catarrh are benefited by using purified lamb's wool in the nostrils to prevent cold air, dust, etc., from coming in contact with the diseased surface. In hypertrophic nasal catarrh, he considered nearly all treatment unavailing, unless the thickened tissue is removed with Jarvis' snare or the galvano-cautery.

Third Day—Afternoon Session—Thursday, *September 6th.*—Dr. Joseph A. White, of Richmond, Va., Surgeon-in Charge of the Richmond Eye, Ear and Throat Infirmary, read an interesting report of

Cases Illustrating Different Injuries of the Eye, with Remarks on Injuries of the Eye and their Results.—Compression of an eye by a blunt instrument may cause ecchymosis, opacity, with or without inflammatory suppuration of the cornea, rupture of the sclerotic near the sclero-corneal ring; hæmorrhage into the anterior chamber or into the vitreous, laceration of the iris, paralysis of the sphincter of the pupil, suspension of accommodation, bursting of the capsule of the lens, stretching or laceration of the zonula of Zinn, and disturbances of the retinal function. If the eye is thrown into violent oscillations, as by concussion, some of these results

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may follow. Strictly speaking, there can be no such thing as *contre-coup* so far as affects the eye-ball. The damage is usually the result of flattening of the eye-ball, the flattening ordinarily occurring in the antero-posterior axis, or at an acute angle to it, and the stretching in the equator or near it, thus stretching apart the sclero-corneal ring, and disarranging the tissues connected with it.

Dr. White then narrated a number of illustrative cases, and made some *Remarks on Stretching of the Zone of Zinn and Dislocation of the Lens.* Injury from compression or concussion of the eye almost invariably results in stretching this suspensory ligament of the lens, and generally results in opacity of the lens, either directly or mediately, through changes effected in the choroid or vitreous. Dislocation of the lens, besides resulting in cataract, often leads to degenerative changes, resulting in cyclitis, with shrinkage of the eye-ball or secondary glaucoma, either of which may end in neuralgia or sympathetic disease of the other eye. In this connection, Dr. White reported an illustrative case, and described the operation performed by Dr. Badal, of Bordeaux, for stretching and rupture of the external nasal nerve or infra-trochlear. A curved incision is made through the skin and subcutaneous tissue at the inner angle of the brow between the pulley of the superior oblique and the tendon of the orbicularis. A strabismus hook is carefully swept closely against the periosteum, and the nerve picked up. This is then separated from its vessels, and by gentle pulling with two pair of flat forceps, one after the other (hand over hand, as it were), it is stretched until rupture takes place. This operation has been performed for persistent ciliary neuralgia, chronic inflammatory and secondary glaucoma, intractable blepharospasm and photophobia, hydrophthalmos, and bids fair to be a great acquisition to eye surgery.

The second class of eye injuries considered are those due to entrance of a foreign body. Small iron filings penetrating the cornea may generally be removed with a magnet. The effect of a foreign body in the eye does not depend so much on its chemical nature or its size, as upon the fact that they are so frequently accompanied by germs of inferior organisms. Experiments have proved that particles of stone, glass, etc., introduced into the anterior chamber do not necessarily cause violent reaction. If they rub against the iris in its movements, then they cause pain and irritation. The same substances introduced into the vitreous humor caused no violent reaction. Iron and copper particles, al-

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though exerting a chemical action, do not necessarily induce violent suppurative reaction when introduced into the anterior chamber; but if introduced into the vitreous, sooner or later they cause detachment of the retina, or continual irritation without suppuration, and thus result in sympathetic disturbance of the uninjured eye. Iron does not produce suppuration in the anterior chamber, nor does copper in the vitreous; in the ciliary bodies only a local suppurative action results. Lead does not provoke suppuration anywhere. Metalic mercury causes inflammatory suppuration in either the anterior chamber or the vitreous.

After discussing at some length the various dominant theories of the manner of development of sympathetic troubles in the sound eye, he passed on to the consideration of the third class of eye injuries—from agents which, by their high temperatures, chemical properties, etc., affect the cornea, conjunctiva and lids. Scalds, etc., should be treated by first thoroughly cleansing the part with warm water. A strong saccharine solution is useful in removing adhering particles of lime. Threatening iritis is to be warded off by ice-cold compresses. He opposes the local use of lead preparations. Repeated separation of the lids from each other and from the eye-ball will prevent adhesions, provided the eschar does not include the cul-de-sac.

The paper concluded with a most interesting detailed account of a case of pulsating exophthalmos, in all probability due to aneurism of ophthalmic artery, with spontaneous cure.

The Report of the Committee on Hygiene and Public Health, by Dr. W. F. Barr, of Abingdon, Va., stated that nothing had been reported during the past year that was entitled to be termed an advance in this department. "Not even in our own State have any steps been taken to protect 'the people' from charlatans. Year after year have committees labored with the members of the Legislature to induce them to adopt *some* kind of a law regulating the practice of medicine, but all to no effect. Although our neighboring Sister States, North Carolina and West Virginia, have done good work in this respect, and Illinois, Michigan, Louisiana and Texas have done likewise, yet in Virginia anybody who can pay the license-tax for the privilege of practising medicine, surgery, etc., can unfurl his banner, hang out his shingle, look wise, and with the assurance of Paracelsus, practise medicine. A good State Board of Health cannot be supported! But when yellow fever, cholera or small-pox is heard of, some are aroused with a kind of 'grave-yard re-

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ligion,' and are willing for the doctors to labor free of charge to save them from disease and death." The report closed with an urgent appeal to the profession not to faint in "well-doing."

Invitations were received from the Blue Ridge Springs Company, the Rawley Springs Company, and a renewal of the invitation from the Rockbridge Alum Springs Company for the Society to meet next year at their favorite resorts.

Rawley Springs, Va., was selected as the place for the next Annual Session, at such time during the summer of 1884 as the Executive Committee might decide upon after conference with the managers of those Springs.

Opium Habit.—The Recording Secretary, at the request of Dr. W. G. Rogers, of Charlottesville, Va., who was unable to be present, presented the following preamble and resolutions, which were unanimously adopted:

Whereas, the insidious habit of opium eating is daily increasing—a habit destructive to the health and morality of its victims, and a public calamity that should be abated by all rightful and legal means practicable; and since it is believed that this habit has been favored and increased, and doubtless, too, caused by the indefinite refilling of physicians' prescriptions by druggists, and by the selling of opium and its products in such prescriptions; therefore

Resolved, That we, the members of the Virginia Medical Society, in convention assembled, will use all proper means to prevent the *refilling* of physicians' prescriptions by druggists, whenever these contain opium, its products, or other narcotic poison, by writing upon each prescription "*this shall not be refilled*," or such other methods as may be deemed best to effect the object in view.

2. That we respectfully petition the Legislature of Virginia to enact such laws as will prevent *this evil*, by making it a penal offence for druggists to refill physicians' prescriptions containing opium, or other narcotic poisons, or to sell poisons or other medicines that are recognized as such, without the prescription of a practising physician, which shall not be refilled, but renewed by the physician, as in his opinion needed.

3. That a committee be appointed by the President of this Society to lay these resolutions before the Legislature at its next meeting, with such reasons for the same as may be deemed expedient.

4. That since this question concerns *all the people*, whose welfare and interests are so deeply involved in its solution, in

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a suppression of the evil, that not only the medical journals, but other papers of Virginia be requested to publish these resolutions.

Dr. H. D. Kerfoot, of Manassas, moved that the committee appointed to petition the Legislature to enact certain medical laws, be continued, looking to a *more perfect organization of the State Board of Health*, as also to the establishment of a *State Board of Medical Examiners, etc.* Carried.

Diphtheria, the subject for general discussion, was then called up.

Dr. Rawley W. Martin, of Chatham, Va., opened the discussion by reading a paper on

Diphtheria as it Prevailed in a Certain Section in Pittsylvania County, Va., in 1882, in which he described the general range of the epidemic which so terribly devastated the southern section of this State during the summer and fall of 1882. The epidemic really began during the winter of 1881–2, and spread from a girl who attended a public school in the centre of the infected district. Since 1861, until this time, the disease had not been epidemic. The summer of 1882 was a wet season, and vegetation was unusually luxuriant. The character of the ground consists of a porous soil with a clay substratum. Several instances of direct contagion occurred. In some cases, the throat was so slightly affected as not to be complained of by the children. Among the most unfavorable symptoms were extensive swelling of the lymphatic glands and chest, and profuse epistaxis. Persistent refusal of the child to lie down was another unfavorable symptom. Some were doggedly determined to take nothing by the mouth—not even water, although thirsty. Diphtheritic paralysis was very fatal. Following the epidemic, a wide-spread epidemic of sore throat—not diphtheritic—prevailed throughout the county. The mortality was about one in seven of those attacked with diphtheria. Infants at the breast were seldom attacked. Few adults had the disease. The treatment from the beginning consisted in following the directions given in most of the works on the subject. Tincture of the muriate of iron disordered the stomach, and chlorate of potash locally did no good. Rectal alimentation was the common method of nourishing the children. Full purgative doses of mercury in the outset seemed to modify the trouble. Bichloride of mercury solution (one grain to ℥iv of water) in small doses, say a teaspoonful, acted well. Egg-nog was also valuable. In fact, alcohol was the one great remedy. From these facts, the Doctor drew the following conclusions:

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1. No history of contagion could be satisfactorily traced and it is questionable whether the disease originated *de novo* or not.

2. In this, as in other epidemics, sanitary surroundings had increased the disease-producing properties of the poison germs and rendered the disease more malignant.

3. The disease requires different treatment in different epidemics.

4. That many lives could be saved if treatment could be carried out without resistance from the sufferer.

5. That mercury is not a hurtful remedy, but really seems to possess as much or more power of destroying the disease germs as alcohol.

6. That the disease may exist in the system and at the same time produce very slight sore throat at all.

7. That the mortality was not greater than is usual in epidemics of like malignancy.

Dr. Bedford Brown, of Alexandria, Va., followed in another paper, entitled

Reminiscences of Personal Experience in the History of Diphtheria.—His experience, he said, dates back to 1856, as to diphtheria. Since that time he has seen the disease both in civil and military practice; both sporadic cases and cases belonging to severe epidemics. But treatment has not advanced *pari passu*. He narrated some of the first cases he met with, which show that they were examples of the true disease; some of the cases were so complicated with other troubles as to make their detail instructive and interesting. For instance, he speaks of a patient who had hemorrhoids at the time diphtheria attacked him. The infections seized hold of the hemorrhoidal tumors, external and internal, and extensive membranous exudations formed, reaching high up the rectum, which he passed in defecation. Further on, he refers to the fact that no disease has a greater diversity of tendency to death. Thus there is tendency to death by toxæmia from diphtheritic laryngitis, nephritis, suppression of urine, uræmia, reflex paralysis, paresis, inanition, etc. Hence, always watch the route by which death is threatening, and guard with special care that road. Dr. Brown is a strong believer in the "dual theory" as to the non-identity of diphtheria and membranous croup; arguing his point chiefly from the pathological and etiological standpoints. In his long experience before diphtheria began in his section, some twenty-six years ago, he never saw a case of membranous croup "followed by paralysis of the voluntary or reflex system of nerves."

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In no case of membranous croup, before diphtheria began in 1856, did he ever witness the kidney troubles that follow diphtheria so frequently. Membranous deposits never occurred on sores or elsewhere on the body, except as a laryngeal membrane before diphtheria was announced. Previous to, and during the process of membranous exudation in croup, the temperature is always high and continuous. On the contrary, who, knowing diphtheria, does not apprehend danger from sudcen fall of temperature? Previous to the outbreak of diphtheria, in 1856, he never asw in cases of croup, a membranous deposit in the rectum, vagina, or on the vulva, or skin. In diphtheria, the salivary glands often become enlarged; before 1856 he never observed such an effect frommembranous croup. Diphtheira is to a greater or less extent infectious. Previous to 1856, he never saw a case of membranous croup that seemed to have the slightest element of infection.

Dr. Brown next referred to the action of diphtheritic poison on the sympathetic and vaso-motor system of nerves. This is chiefly manifested in its paralytic tendency, as shown by paralysis of the heart, stomach, and the digestive organs generally, as also of the kidneys, ending in suppression. Many other well defined points of difference between diphtheria and membranous croup were brought out.

After this he passed to the *treatment of diphtheria.* Cauterizations are of no service ordinarily. Alum and tannin next came to the front. After their failure to arrest the throat affection, tincture of the chloride of iron was brought into use, and then tincture of iodine—each as a local application. Sulphate of copper and zinc, dissolved in honey and tar-water, then became a popular local remedy. Indeed, almost every conceivable form of astringent, stimulant, alterant, and caustic were resorted to as local applications. The earliest efforts at a *general* treatment of epidemic diphtheria probably consisted in the use of emetics followed by mercurial treatment. Chlorate of potash soon afterwards came into use; then muriated tincture of iron and finally quinia sulphate were added. In mild cases this combination is useful as constitutional remedies, but in addition, alcohol is needed as a nutrient stimulant in severe cases. Belladonna and strychnia have also proved valuable helps. Disinfectants and antiseptics are useful as local applications. Sulphurous, chlorinous, and other like vapors inhaled are serviceable. There are always digestive and assimilative troubles; especially in severe cases are these standing difficulties. In addition to

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nourishment and cleanliness of the air-passages, he recommends the following local antiseptic:

℞. Listerine.....f℥ss
Cinnamon water.....f℥iv
Chlorinated solution of soda.....f℥ss
Carbolic acid.....gtt. vj.—M.

S.—Use with syringe or atomizer to throat or nose.

It combines well with the leading vegetable and mineral disinfectants.

For a local application over the salivary and cervical glands, he recommends the application of the following lotion:

℞. Chloride of ammonium.....
Chlorate of potash.....ää ℥ij
Rose water.....
Alcohol.....ää f℥iij.—M.

S.—Apply to the external swelling frequently and freely.

This combination is cooling or refrigerant.

For the hæmorrhagic form of diphtheria, Dr. Brown recommends the combined influence of oil of turpentine, ergot and digitalis internally, and the local spray of dilute Monsel's solution. As an internal disinfectant and tonic,

℞. Tincture of the chloride of iron.....f℥ij
Chlorate of potash.....℥j
Tincture of nux vomica.....gtt. xx
Tincture of digitalis.....f℥ss
Water.....f℥ijss.—M.

S.—Teaspoonful, to a child of two years of age, every one or two hours, in water.

℞. Hyposulphite of soda.....℥ij
Sulphurous acid.....f℥iij
Water.....f℥ij
Glycerine.....f℥j.—M.

S.—Teaspoonful every alternate hour, to be taken with above.

Dr. William Pepper, of Philadelphia, Penn., has written Dr. Brown that he uses, and with encouragement, minute doses of bichloride of mercury and tincture of nux vomica, but Dr. Brown has no experience in the use of this special formula.

Dr. Wm. Selden, of Norfolk, Va, gave the highest recommendation of chlorine water prepared according to *Watson's Practice*, 1st ed. He uses muriatic acid and chlorate of potash to make chlorine, and mixes one-half drachm to four ounces of water, giving one teaspoonful every half-hour, fol-

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lowed by whiskey toddy each time. He had never seen a patient die who was under this treatment. For a local application, he uses alum, two drachms, salicylic acid one drachm, sulphur one drachm, with enough glycerine to make the preparation of the consistency of honey. This local and systemic medication is the general Norfolk treatment.

Dr. Wm. H. Coggeshall, of Richmond, gave Reiter's theory of diphtheria, which is that the fibrin-destroying function of the liver is not fulfilled as it should be, and hence fibrin accumulates in the blood. Dr. Reiter gives twenty grains of calomel at once, and ten grains every hour, until half an ounce is taken, and claims to cure all cases of the disease.

Session adjourned to 7:45 P. M.

EVENING SESSION.—Honorary Fellow Dr. A. M. Fauntleroy, of Staunton, read a report on the therapeutic qualities of **Rockbridge Alum Springs Water.** After giving a chemical analysis of the Springs, he showed the therapeutic uses, and gave clinical results of the action of the water. Dr. Fauntleroy specially pointed out the therapeutic value of these waters in scrofulous, tuberculous and specific diseases. The waters are "alterative" in the therapeutic sense of the word, as well as deobstruent. In dyspepsia of various forms, especially where it occurs in overworked ladies, these waters, properly used, are of peculiar value. They are also particularly recommended for "female irregularities." They diminish the amount of acid secretions, and hence are useful in forms of nephritic gravel, as well as in gastric and hepatic torpidity. The sodium sulphate probably assists in restoring the normal activity of the liver.

The President, Dr. J. Edgar Chancellor, enumerated several cases of severe strumous disease which had occurred in his practice, which had been entirely cured by the use of the water.

Dr. George Ben. Johnston, of Richmond, presented a report of **Forty-seven Cases of Urethral Stricture Treated by Internal Urethrotomy.** He claimed this operation as the surest method of curing stricture in the male urethra. The main features of his treatment are thorough division of the stricture and persistent local treatment for a long time afterward. He stated that many of his cases were re-examined from four months to four years after cutting, and no contraction was found.

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Letters of Regret.—A letter was read from Honorary Fellow, Dr. J. Marion Sims, of New York, who had just returned from Europe, regretting his misfortune in not being able to attend. A like letter was received from Dr. Metcalf, of New York.

The Subject of Diphtheria again being called for, Dr. J. J. Chisolm, of Baltimore, Md., made some remarks, in which he expressed a doubt whether there was really such a trouble as diphtheria of the eye, as a distinctive disease.

Dr. McLane Tiffany, also of Baltimore, stated that tracheotomy does not cure the disease, while the operation does not kill the patient. Tracheotomy, even when successfully performed, relieves a symptom—that of "want of breath." He thinks it almost impossible to decide where the difficulty of breathing in such cases begins, and in many cases it is impossible to decide when to begin to operate. He has never been able to decide strictly when the obstructing membrane was above the sternum, or when below the usual point of tracheotomy. He related a peculiar case, in which he opened the trachea just before death resulted, but after opening the windpipe, he found it fully plugged with a diphtheritic exudation, through which neither a tracheotomy tube could pass, nor a probe made to enter.

Dr. L. B. Edwards related a case of tracheotomy he had seen performed (and in which he had assisted) by Drs. Hunter McGuire and O. F. Manson. One of the heated blades of the Paquelin thermo-cautery, as modified by Dr. H. P. C. Wilson, of Baltimore, was used as the knife. The operation was successfully performed, and the patient lived for some days. He died, however, of capillary bronchitis. Whether his death was due or not to an extension of the membranous trouble, he had no opportunity of finding out, but he doubts whether or not there is a greater cause for apprehension than the extension of the membrane downwards. Blood-poisoning evidently had much to do with his death. Dr. Edwards fully agreed with Dr. Tiffany that it was impossible to decide *when* or *even where* to operate; but in cases which are sometimes presented he thought doctors, as the only parties upon whom anxious friends depend in such an adversity, should speak plainly and operate boldly. We cannot always save life, but because of popular prejudice against an operation that has saved so few lives, why should we reject that *one* operation that has saved *some* lives? Is there a better remedy for an obstacle in the windpipe than giving the patient free inspiration? If we fail to reach far enough to let

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the patient have the necessary respirations, then the doctor is simply unfortunate and the patient is the victim.

Dr. W. W. Parker begged the younger doctors not to become discouraged because they lose some patients who have diphtheria; no physician can save all his cases. In many cases, he had found value in the vapor of lime. Build a sort of tent over the child, and inside of this tent slake lime so as to get the air fully impregnated with its vapor.

Dr. J. N. Mackenzie, of Baltimore, remarked upon the development of adenoid growths as a sequel of diphtheria. They occur especially in the post-pharyngeal space. This is a point not enough studied; but little has been written upon it. He believes the simplest means of treatment to be the best; hence he relies mainly on steaming for local applications. Internally he would advise the use of small doses of the bichloride of mercury, such as a teaspoonful or two, according to age, etc., of a solution of one or two grains of corrosive sublimate in a pint of water.

Dr. R. I. Hicks of Cassanova, Va, related a peculiar instance where a diphtheritic patient associated with a number of persons in health without conveying the disease to them.

Drs. Patterson, of Monterey; C. T. Whiting, of City Point; James Craddock, of Halifax, and others, reported cases as confirmatory of one point or another that had been made.

Dr. Wm. C. Dabney, of Charlottesville, Va., said he had seen cases where sanitary conditions existed, and yet death had occurred in a few days. He had seen peritonitis, he thought, produced by diphtheria.

Dr. Samuel B. Morrison, of Rockbridge Baths, Va., had never seen a case that was not constitutional in its origin; but he believed in local treatment. His experience had taught him that the poison may remain quiescent for years in one locality, and then suddenly break out. He thought all remedies should be more often employed than is common, and that a person of strong vitality cannot contract the disease. From his experience, he judged diphtheria and typhoid fever to have the same germ, only manifested in different ways. He strongly believed in complete isolation of a diphtheritic patient.

Dr. J. St. Peirre Gibson, of Staunton, Va., believed that peritonitis could be produced by diphtheria, and cited a case in point.

Dr. A. M. Fauntleroy, of Staunton, mentioned a number of cases showing the peculiarities of the diphtheritic poison. One instance showed where a servant-girl wiped up the floor

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where ice had melted from a diphtheritic corpse, and contracted the disease; and he mentioned another case where a boy stopped over night at a house where the disease existed several days before, and not only received the poison, but communicated it to thirty-two other children in an asylum which he entered. He spoke of the difficulty of ingestion of food in the disease, and mentioned a case where he had fed the patient three weeks through a stomach-tube, with ultimate recovery. He thought local treatment was mainly important, because the membrane present becomes, after a time, putrefied, and, of course, if left alone, the putrescent poison would be carried into the circulation by the lymphatics. This was the reason for the local employment of disinfectants. The local application he preferred was a combination of Monsel's solution, carbolic acid, and glycerine, applied with a brush. For internal treatment he used chlorate of potash, large doses of tincture of iron, five-grain doses of quinine, and unstinted quantities of whiskey.

Cholera Infantum.—Dr. Samuel K. Jackson, of Norfolk, Va., by request, described his method of *preventing* cholera infantum, which consisted in the administration of the following:

℞. Sulphite of soda,
Hyposulphite of soda,
Aromatic syrup of rhubarb,
Bicarbonate of soda.....$\overline{aa}$ gr. ij.—M.

S.—Take every two hours, when required.

Malarial fever was selected as the subject for general discussion at the next annual meeting, and Dr. R. B. Stover, of Richmond, Va., was appointed to open it.

Rockbridge Alum Springs, Va.—After the introduction and adoption of several complimentary motions as to the excellent management of this place, the following, offered by Dr. Samuel K. Jackson, of Norfolk, Va., was unanimously adopted:

"The Medical Society of Virginia does hereby bear testimony to a thorough examination into the medicinal properties of the Rockbridge Alum Springs water, and from the professional knowledge and information obtained, it unhesitatingly endorses and recommends the same to persons afflicted with the following disorders and diseases: some forms of dyspepsia or indigestion, scrofula, incipient consumption, chronic bronchitis, chronic laryngitis, chronic pneumonia, chronic diarrhœa, chronic dysentery, aphthous diseases, many of the chronic skin diseases, torpidity of the liver, and diseases peculiar to females.

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The Committee on the Constitution of the Society, appointed last year to suggest what, if any, changes were necessary, presented their report, and most of the emendations suggested were adopted—all to take effect at the next annual session.

The same Committee was continued another year to codify the various resolutions, etc., governing the action of the Society, in matters not involving the Constitution.

Various resolutions of local importance were passed, and the Society then adjourned, to meet next year at the Rawley Springs, Rockingham county, Va., at the call of the Executive Committee.

Analyses, Selections, etc.

Injuries to the Head.—In an interesting article upon this subject, Dr. S. E. Munford, of Princeton, Ind., in the *Transactions of the Indiana State Medical Society*, 1883, relates a series of cases well worth study, one of which illustrates plainly, as follows, how much benefit is sometimes derived from non-meddlesome surgery: "A man engaged in a saw-mill fell from a height, the left side of the head striking a square oak block. The upper portion of the auricle was entirely severed; the scalp was extensively cut and peeled up from the bone, and the skull fractured. The break extended from the coronal suture through, or nearly through, the transverse diameter of the parietal bone. Near the middle of this line of fracture there was a vertical seam joining the transverse line from below. The lower fragments were pushed in to about the thickness of the bone. When called to see him, eight days after the reception of the injury, it was learned that immediately followiug the accident there existed the condition characteristic of concussion, which immediately passed, and was in a few days succeeded by fever, pain in the head, and delirium. We found him violently maniacal, requiring, day and night, the presence of strong men to restrain him. The scalp was red and puffy, and was suppurating along its cut edges. The skull was perforated, and the elevator passed under the depressed bone, but failed to lift it until an overlapping angle of bone was cut with Hey's saw. The dura-maetr showed a slight change by inflammatory action; no pus was discharged. It was not possible to close the inflamed and swollen scalp, and as the

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case progressed the scalp retracted, leaving a vast expanse of uncovered bone. The trephine hole was near the middle of this area, thus giving an opportunity to watch the process of repair of the opening in the bone. The dura-mater for the first week pulsated in the bottom of the trephine cut, in the usual way; after this time it was noticed that this membrane gradually receded, leaving the inner cut edge of the bone visible. A few days after, the advance of the granulating columns showed themselves at the margin of bone and steadily crept across the exposed membrane and the walls of the cut bone, until at last the void was filled by this marvelous patch-work tissue. The repair consists in a thickening of the dura-mater over a surface considerably larger than the aperture in the bone. This supplemental tissue, as is known, ossifies in exceptional cases. The rule is the formation of fibre-cartilage. Within a day or so after the operation on this man, the temperature declined, the delirium began disappearing, and the case made steady progress to entire recovery. The exposed bone was not wholly covered until four months had elapsed. It is believed that the pericranium was saved by abstaining from frequent washings, and by cleansing the wound by gently flooding with tepid water, allowing no wiping or mopping with sponges. The tedious granulating process over the bared skull has doubtless been noticed by all who have seen such injuries. It behooves the surgeon, therefore, to save the scalp in all injuries of this structure, and to endeavor to have as early a union of its cut edges as is possible and admissible. Wiseman, after abusing a barber for cutting off a piece of the scalp of a "horse courser," and hanging it up in his office to show how great a surgeon he was, adds: 'However ragged the integument may be, however ingrained with mud or sand, or anything of the kind, you will replace it and leave it to nature to determine how much and which part is to be separated.' The lesson of this case is that the lifting of an offending edge of bone may cut short an inflammatory process which would otherwise go on to suppuration and death."

Another case instanced in full is interesting because of the secondary symptoms: "A young farmer, in firing a gun, received from an explosion of the breech a wound above the left eye. He fell to the ground, but with a little assistance walked to his home. He remained indoors for one week on low diet. In two weeks after the injury he was looking after his business, but began complaining about this time of

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pain on the injured side of the head, behind the ear. A message finally came to the effect that he had convulsions. These occurred during the night. The next day I saw him, in connection with Dr. West, who had the management of the case from the beginning. We found him in bed, but so far as we could see he was wholly rational and free from fever. The original wound of the head was healed, and the integument was neither angry nor puffy. The pain in the head which had harrassed him for days had, he said, disappeared. We could not doubt, however, but that the injury of the head stood in the relation of cause to the spasms of the night previous. After directing cold to the head and an active cathartic, we left the house. We were scarcely started, when we were recalled, and told that he had another spasm. We found him convulsed with a true epileptic fit. Any further delay of operative measures was believed inadvisable. The administration of chloroform was begun while he was still convulsed. After raising a semi circular flap of the integument, in the centre of which was the original wound, a fracture was found, extending from the superciliary ridge upward and outward, one and a half inches. The upper margin was depressed nearly the thickness of the bone. After removing a wheel of bone by the trephine, it was found that the junction of the two plates had been notched, thus opening the frontal sinus. The depressed bone was, with much difficulty, lifted to the common level. No loose fragment of the external plate was noticed. The dura mater was but slightly changed from the normal appearance. No pus was discharged. The flap was laid in place and healed, leaving a neat semi-circular thread-line of scar tissue, which is, in truth, a "line of beauty." He recovered rapidly from the operation, and had neither convulsions nor pain afterwards. There is a general impression that epilepsy only follows injuries in which the classical 'speculum' has been driven in. The offence in this case was the rough edge of bone, and the depression, it will be noticed, was not great. If left to itself, the result would likely have been suppurative meningitis; or, that escaped, permanent traumatic epilepsy."

Dr. Munford says that doubtless many deaths, capable of being prevented, occur from injuries of the head. The factors to this result may be enumerated as follows:—1. Inattention to the lighter injuries; 2. Abandonment of graver ones; 3. Too great conservatism in the management of an intermediary class. "No injury of the head is too slight to

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be despised or too great to be despaired of," wrote Liston, and it is a truth whose teaching, if faithfully adhered to, would be worth many a human life. How often people come to us, having received a blow which contused or cut the scalp, whose wounds receive a little washing and perhaps a little stitching, but who are allowed to depart with no word of caution. The ordinary occupation is perhaps at once resumed—rigors, fever, pain in the head, delirium, coma, death, are frequently the sequential phenomena of such neglected cases. Guthrie said that while it was doubtless true that the internal plate of the skull was often fractured by blows that inflicted no injury to the external table, yet in a practical point of view it was well to bear it in mind, otherwise few receiving these injuries would escape the trephine. It were well for our patients did we proceed in the management of these hurts as if every blow which sent a patient to us had done violence of a serious sort—not that they should be trephined, unless necessary, but watched. When we see cases of so desperate a character as to dispel hope, we should remember that a tamping bar three feet long has been driven through the human skull, and that minnie balls have traversed the cranium and its contents, from forehead to occiput, without fatal results.

In that class of injuries between the lighter and graver—injuries involving lesion of bone and perhaps of the integuments, which, by their nature, challenge immediate attention, and yet present a hopeful aspect—is the practice of the profession at large that which most tends to safe life? If surgery is defective in this direction, it may, in apology, be said that no hurts of the body present so many complex and obscure elements as do head injuries. Hence it is we often find cases whose entanglements baffle the keenest sagacity, and for whose management no principles or established rules present themselves.

The axioms of surgery regarding operative measures in fractures of the skull, are the evolutions of clinical experience, and are, in the main, doubtless, correct in their teachings. But shall we invariably follow the teachings of these precepts? One declares that a simple depressed fracture of the skull, without symptoms of compression, shall be let alone, so far as the bone is concerned. Another teaches that the same fracture, provided a wound of the scalp co-exist, may have operative treatment. I am inclined to the belief that an incision of the scalp is too slight a complication of the injury to be allowed to hinder the lifting of the bone,

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especially as we may call to our aid antiseptic measures. If there be a rough edge of bone or spicula impinging the dura, which is less tolerant than the brain itself of intruding objects, subsequent intra-cranial trouble is highly probable. The bone lifted, this danger is largely averted. The limited experience furnished by my own practice, with observations of the practice of others, leads me to believe that primary surgical measures, in fractures of the skull, add little to the shock of the existing injury. I do not say that every case of fracture with depressed bone shall have operative treatment. No one can say elsewhere than at the bedside, which cases shall and which shall not have such treatment. Professional sagacity, face to face with its work, is superior to any law or rule in surgery.

Suppurative meningitis, with resulting compression of the brain from pus, is a frequent issue in fissures and other injuries of the skull. No treatment for this trouble will avail save such as surgery may bestow.

Mr. Hewitt teaches that in this class of cases we are only to operate where, in addition to fevers and rigors and to the local signs about the bone, there are also well-marked brain symptoms—coma, and, better still, hemiplegia. If we wait until these phenomena are present and operate, we may at least feel that the operation did not destroy the patient. Arachnitis and brain disorganization are apt to put him "past all surgery." Mr, Pott, the great apostle of the trephine, found justification in the puffy tumor, the secession of the peri-cranium, restlessness, fever, slight rigors, pain in the head and quick pulse, for perforation of the bone, and his record is five out of eight such injuries saved.

Timely operative treatment in injuries of the head is, doubtless, often withheld because of an existing prejudice against such measures. The danger growing out of the use of the trephine as a surgical procedure is, in my belief, much overrated. Opening the skull with a conical trephine in an ordinarily deft hand, is in itself attended with little danger, and is an operation that should intimidate neither patient nor surgeon. Let timorous ones read the following from John Bell's Principles of Surgery: "I, the underwritten, Phillip, Count of Nassau, hereby declare and testify that Mr. Henry Chadbourne did trepan me in the skull twenty-seven times, and after that did cure me well and soundly."

Natural Appetites.—In order to distinguish a poison-stimulant from a harmless and nutritive substance, Nature has thus furnished us three infallible tests:

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1. *The first taste of every poison is either insipid or repulsive.*
2. *The persistent obtrusion of the noxious substance changes that aversion into a specific craving.*
3. *The more or less pleasurable excitement produced by a gratification of that craving is always followed by a depressing reaction.*

The first drop of a wholesome beverage (milk, cold water, cider fresh from the press, etc.) is quite as pleasant as the last; the indulgence in such pleasures is not followed by repentance, and never begets a *specific craving.* Pancakes and honey we may eat with great relish whenever we can get them, but if we can't, we won't miss them as long as we can satisfy our hunger with bread and butter. In midwinter, when apples advance to six dollars a barrel, it needs no lectures and midnight prayers to substitute rice-pudding for apple-pie. A Turk may breakfast for thirty years on figs and roasted chestnuts, and yet be quite as comfortable in Switzerland, where they treat him to milk and bread. Not so the dram-drinker; his "thirst" cannot be assuaged with water or milk; his enslaved appetite craves the wonted tipple, or else a stronger stimulant. Natural food has no effect on the poison-hunger. Nature has nothing to do with such appetites.—From "The Remedies of Nature," by Dr. Felix L. Oswald, in *Popular Science Monthly* for October.

Book Notices, &c.

Anatomy: Descriptive and Surgical. By HENRY GRAY, F.R.S., Lecturer on Anatomy at St. George's Hospital Medical School. *With an Introduction on General Anatomy and Development.* By T. HOLMES, M.A., Cantab., Surgeon to St. George's Hospital, etc. *The Drawings,* by H. V. CARTER, M. D., Late Demonstrator of Anatomy at St. George's Hospital. *Edited* by T. PICKERING PICK, Examiner in Anatomy, R. C. S., Eng. A New American, from Tenth English Edition, to which is added *Landmarks, Medical and Surgical,* by LUTHER HOLDEN, F. R. C. S. *With Additions,* by WM. W. KEEN, M. D. Philadelphia: Henry C. Lea's Son & Co. 1883. Imperial 8vo. Pp. 1023. Issued in cloth, leather and half Russia covers. (For sale by Messrs. West, Johnston & Co., Richmond.)

We presume it is scarcely necessary to say more of this invaluable standard work than to announce the issue of this new edition. With the corrections made in each edition, both as to text and plates, we may say that the publication, as now made, reaches almost absolute perfection. It is there-

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fore invaluable to the college student in the prosecution of his studies, both during the lectures and in the dissecting-room, as it is also invaluable to the practitioner as a work to which he must frequently refer for information or else to refresh his memory. The addition of the most recently revised work of Holden on *Landmarks, Medical and Surgical*, was a happy thought. It furnishes exactly that anatomical information which the surgeon, physical diagnostician and general physician so often wishes to obtain. This entire work, as now presented, has been passed through the press under the supervision of Dr. Richard J. Dunglison, of Philadelphia, as it has also met with two revisions of former editions by the English editor, Mr. Holmes. The title of the book, which we prefix in full to this notice, gives a full statement of the scope of this issue of "Gray's Anatomy."

The Pathology, Diagnosis and Treatment of the Diseases of Women. By GRAILY HEWITT, M. D., F. R. C. P., Professor of Midwifery and Diseases of Women, University College, and Obstetric Physician to the Hospital; Formerly President of the Obstetrical Society of London, etc. New American from the Fourth Revised and Enlarged London Edition. With 236 Illustrations. Edited with Notes and Additions by HARRY MARION SIMS, M. D., Attending Surgeon to St. Elizabeth's Hospital, New York, etc. New York: Bermingham & Co. 1883. 8vo. In Two Volumes. Pp. 469–561. Cloth. $2.25 per Volume.

This standard work, which years ago placed Graily Hewitt in the front rank of authorities on Gynecology, is presented revised and enlarged, and although in this bustling age the active demand for bulky works grows less and less, this is one of the few to be not only read, but studied. One of the main points the author insists upon, is that one of the most common and seldom noticed causes of change in the shape and position of the uterus, is an impoverished condition of the blood, produced by imperfect nutrition. He describes this condition as a state of "chronic starvation," and makes the positive statement that alterations in the shape and position of that organ "are rarely witnessed except in individuals whose general strength has become seriously impaired by a systematic, and often a lengthened practice of taking little food." He is the first writer who has assigned to its true place in the etiology of uterine diseases, what may be termed elementary nutritional deficiency. Due credit is given to Dr. Weir Mitchell, of Philadelphia, for his success in the treatment of nervous disorders dependent upon uterine diseases, and Dr. Hewitt notices the fact that their treatment of

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such affections, by rest and food, has been almost identical for years.

Another point the author calls particular attention to is what may be called the mechanical pathology of uterine disease. He believes that the large majority of the pains, discomforts and inconveniences complained of by females and referred to the generative organs, can be traced to, and shown to be dependent upon, the presence of mechanical changes in the uterus, and to the effects of such changes; and he advances the conclusion, that patients suffering from symptoms referable to the uterus, are almost universally found to be affected with flexion or alteration in the shape of that organ, easily recognized, but varying in degree.

The subject of the vomiting of pregnancy, although usually given over to the writers on obstetrics, is here most fully discussed because the author does not agree with the general opinion as to its causation. He believes it to be, of course, a neurosis, but produced by mechanical means.

During the first three months of pregnancy the gravid uterus has its size increased, and its muscular tissue becomes something softer than normal. As soon as the patient assumes an upright condition on arising, the uterus obeys the law of gravity, and the heavier fundus bends the body of the organ at a more or less acute angle. This flexion produces pressure on that portion of the uterine nerve tissue engaged, and reflex action ensues, to the production of nausea. Precisely the same condition is present in flexion of the non-gravid uterus, and produces the same consequences. After the third month of pregnancy, the organ usually rises from out the pelvis, and a condition of flexion is rarely possible after that period.

Dr. Hewitt does not agree with Charcot, and most writers, that the peculiar irritable condition of the nervous system which we call hysteria, is due to ovarian disorders, but claims that theory and experience both, lead him to locate the origin of hysterical attacks and hysterical sensations, in some flexion or malposition of the uterus, and that remedial measures adapted to the latter, are curative of the hysteria.

A feature of the work is, that all instruments and appliances are drawn their actual size in the illustrations, thus rendering a full understanding of their use and value less difficult. The careful editing of Dr. Sims is manifest in every chapter, and the matter added by him (in brackets) is in each case valuable in adding to the suggestions of the author. Though handicapped by the great fame of his

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father, Dr. Sims is becoming known among the gynecologists of the day, and bids fair to uphold the family name in the profession at the same height on which it now rests.

Sexual Impotence in the Male. By WILLIAM A. HAMMOND, M. D., Surgeon General U. S. Army (Retired List); Professor of Diseases of the Mind and Nervous System in the New York Post-Graduate Medical School, etc. New York: Bermingham & Co. 1883. 8vo. Pp. 274. Cloth. Price, $2.50.

Dr. Hammond has, in a measure, taken a new field for work from that formerly occupied by him, and with his rich experience, vigorous employment of language, and power of expression, it is not to be doubted that he will make this work a standard. He intends at no late day to add to it a full consideration of the subject of sterility, not only as occurring in the male, but also in the female sex. Some few articles written by him for medical journals have been incorporated in this volume, but by far the greater portion of the book appears for the first time, and will be read with interest by the profession. The chapter on Absence of the Sexual Desire, illustrated by cases of abuse and pederasty, is one which may well be studied for the lessons it teaches. There is hardly a professional man in the land who will not, some time, be consulted on subjects related to Impotency, and it is required that he should leave the rut of "general principles," and study specially the pathology and treatment indicated. For that purpose nothing could be better devised than the work we notice. Everything known concerning the impossibility of the natural function is here set down, and the reader cannot but feel that Dr. Hammond has given him light upon a dark subject. Our only unfavorable criticism is upon the fact that there is no index.

Hand-Book of Electro-Therapeutics. By DR. WILHELM ERB, Professor in the University of Leipzig. Translated by L. PUTZEL, M. D., Neurologist to Randall's Island Hospital, and Physician to the Clinic for Nervous Diseases, Bellevue Out-Door Department, etc. With Thirty-nine Wood Cuts. New York: Wm. Wood & Co. 1883. 8vo. Pp. 366. Cloth. June No., Wood's Library of Standard Medical Authors.

Valuable as this work is in its special domain, we think it can hardly be said to be preferable to the standard works of this country on the same subject. It seems to be made up of lectures delivered before his class by Prof. Erb, and though evidently embracing all the advanced knowledge upon the subject, it is not as valuable to the general practitioner as Beard and Rockwell's treatise on Electricity. The

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major part of the work is devoted naturally to electro-therapeutics of the psychoses, and has evidently been very carefully written. One of the better results obtained from the use of lectures to make a volume, is a fullness of detail, which is not generally found in ordinarily written books, and this quality is particularly manifest in the work under notice. It is an excellent addition to the present standard treatises on the medical uses of electricity.

The Diagnosis and Treatment of Diseases of the Ear. By OREN D. POMEROY, M. D., Surgeon to the Manhattan Eye and Ear Hospital; Ophthalmic and Aural Surgeon to the N. Y. Infant Asylum, etc. With 100 Illustrations. New York: Bermingham & Co. 1883. 8vo. Pp. 392. Cloth. Price, $3.00.

A peculiar feature of this book is the absence of the usual chapters on Anatomy and Physiology generally found in works of the kind. The author believes, and we think rightly, that what the practitioner of the day requires is a practical treatise, and he therefore recommends those who wish to study the particular points named, to examine works upon those subjects that have room to treat of them more exhaustively than his space would allow. His chapters on Acute and Chronic Catarrh are specially valuable to the doctor who is not a specialist. He recognizes fully the danger of over-syringing the ear, and prefers the dry method of cleansing the auditory canal. The volume from beginning to end is replete with practical suggestions, and no pains have been spared to make it full and complete in every particular. No physician, at all interested in diseases of the ear, can afford to be without this work.

The Roller Bandage. By WM. BARTON HOPKINS, M. D., Surgeon to the Out Departments of Pennsylvania, Episcopal and University Hospitals, etc. With Seventy-three Illustrations. Philadelphia: J. B. Lippincott & Co. 1883. Cloth. 12mo. Pp. 95. (From Publishers.)

The illustrations in this manual occupy about as much space as the text. Indeed, a peculiarity of the book is that Dr. Hopkins applied all sorts of bandages to different parts of the living body, and during the process in each case, wherever any special remark or description seemed required, he would stop just there to have a photograph taken. The illustrations are taken from the photographs, and hence are accurate. The plan of the work is, therefore, based on the most practically valuable principle. And the accomplishment of the task undertaken by both author and publisher has been creditably achieved.

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Editorial.

Medical Society of Virginia.—The fourteenth annual session of the Society was held on September 5, 6, and 7, 1883, at Rockbridge Alum Springs, and not only was the session replete with interest to the members attending, from the papers and ensuing discussions, but also, owing to the liberal courtesy of the management of the Springs, the social enjoyment of the occasion made it one to be remembered. The President of the Spring's company, Col. Fred. Effinger, aided by his efficient chief of staff, Maj. Peyton, made good his expression "that he wanted the Society to feel at home there," and many of the younger members especially, carried away with them more than pleasant remembrances of the ball and hops given by the lady guests at the hotels.

Quite a full account of the proceedings will be found in our present issue, and in view of the interest excited in this year's meeting, and the large attendance of working members of the profession, there is every prospect that the session of 1884 may even surpass it in practical importance to the Fellows of the Society.

To the full reports given of the proceedings in this issue, copied from the *Medical News*, of Philadelphia, we add some notes given by the special reporter for the *Medical Record*, of N. Y., which are very full and accurate. Many of the members present will recall the fact that the reporter in question was Dr. Wm. H. Coggeshall, of Richmond, Va.

We trust that the Society will keep up the prominence it has gained. The President-elect, Dr. J. Edgar Chancellor, of Charlottesville, Va., received the unanimous vote of the Society. Other gentlemen were nominated for this office; but with extraordinary courtesy and generosity, which we have never known equalled, they each and severally declined the nomination as given them. During his short occupancy of the chair, he manifested an executive ability which gratified his friends, and pleasurably surprised those who had nominated other gentlemen for the office.

The next annual session has been appointed to be held at Rawley Springs, Rockingham county, Va., at such time as the Executive Committee of the Society may decide upon. Since it seems to be a general wish of the Fellows of the Society who are usually not able to attend the sessions on account of the lateness of the season at which they have been formerly held, and since the session of 1884 is again to

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be convened at another one of our Mountain Summer Resorts, we trust that it will be effected for a week as early in August as possible.

At the recent meeting of the Society, Dr. Robt. G. Cabell, Jr., of Richmond, Va., was elected Recording Secretary, and Dr. R. T. Styll, of Richmond, Va., was elected Treasurer. The Fellows of the Society who have so long been in the habit of corresponding with the editor of this journal as either of these two officers, will please, for the coming year, correspond regarding Society matters with the gentlemen named.

The Texas Courier-Record of Medicine is the name of a new monthly medical journalistic enterprise in the great Southwest, edited and published by Drs. F. E. Daniel and E. L. Stroud, of Fort Worth, Texas. The first number contained a very interesting article by the senior editor, on a new form of bougie, the instrument being made of catgut; and the remaining original and selected papers show care in preparation. The gentlemen mentioned propose to make it a live, newsy journal, especially adapted to meet the wants of the four thousand practitioners of the Lone Star State, who are now without local medical literature, save as exhibited in the *Courier-Record*. From our knowledge of Dr. Daniel we are assured that both himself and associate will make their journal second to none in the West.

The first number contained 46 pp. Annual subscription, $2.00

Iodia.—Dr. Richard McSherry, Professor of Principles and Practice of Medicine, University of Maryland, Baltimore, Md., says: "I have used the preparation known as "Iodia," prepared by Messrs. Battle & Co., of St. Louis, in my practice, and have found it a very satisfactory agent in cases for which it is deemed most appropriate."

American Academy of Medicine.—The annual meeting of the Academy will be held at the New York Academy of Medicine, 12 West Thirty-first street, New York, on Tuesday, October 9th (3 o'clock P. M.), and Wednesday, October 10th, 1883. Dr. Richard J. Dunglison, of Philadelphia, Pa., Secretary.

Hartford Hygienic School.—This school is in successful operation again this year, the session beginning October 3d, 1883. Prof. C. Howard Young conducts it as before.

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Original Communications.

ART. I.—**Chloroform in Labor.** By JNO. HERBERT CLAIBORNE, M. A., M. D., Ex-President and Honorary Fellow of the Medical Society of Virginia, Author of "Clinical Reports from Private Practice," etc., Petersburg, Va.

From a record of more than two hundred cases of labor, mostly consecutive, in private practice, and in every one of which chloroform was administered, I have derived the following conclusions:

1. The process of labor in all of its stages is facilitated by the use of chloroform.

2. The duration of labor in all of its stages is shortened by the use of chloroform.

3. The accidents of labor in all of its stages are less frequent under the use of chloroform.

4. The pangs of labor in all of its stages may be entirely, yet safely obtunded by the use of chloroform.

These conclusions, at least in their entirety, may not be accepted by very many of the profession,* and some of

*In the last edition (American) of Playfair's *Midwifery*, 1880, published by Henry C. Lea, page 288, we read: "A common error is the administration of chloroform to an extent, which materially interferes with uterine contractions, and predisposes to subsequent post-partum hæmorrhage." Again, on page 290, "Generally speaking, we do not think of chloroform until the os is fully dilated, the head descending and the pains expulsive." And on page 291, "Bearing in mind the tendency to produce uterine relaxation, more than ordinary precautions should be taken against post-partum hæmorrhage in all of which it has been freely administered." These are the views which I have abandoned and which I wish to combat.

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them I felt it my duty to combat in a public discussion some ten years ago. I then believed that labor was often delayed by the use of chloroform, and that the danger of post-partum hæmorrhage was greater after the administration of that anæsthetic, and I was upheld and endorsed by more than one of the eminent medical men who were present on that occasion. I wish to confess and recant the error which I then held and promulgated. I came into practice just when the God-given boon had been commended to the world by Simpson. I heard it denounced by a revered and distinguished preceptor as dangerous, cruel, and a criminal contravention of the divine curse—"In sorrow shalt thou bring forth children" (Genesis, III, 13); and though I used it at as early a date as any of my compeers, yet I used it for a long time only in bad cases; and I used it hesitatingly, and, as it were, under protest, accepting it as an evil, only of less magnitude than the fearful complications of labor, which called for its obtunding effects. Since then I have learned to accept it as a boon—a benefaction beyond computation. The conditions and circumstances must be very rare and very peculiar, which would justify a practitioner, now, in withholding the blessing from a woman in the agonies of child-birth. Nothing gives me so much pleasure as the promise of that Lethe to the expectant mother, when the fearful hour draws nigh, except the fulfilment of that promise and the grateful expression of returning consciousness—"Is it indeed all over, and is my baby born?"

I cannot recall any accident or any evil result of the use of chloroform in any case of obstetrics in my own practice, nor do I remember to have read of any case in the practice of others, in which any fatal result was recorded. I regret that I have not a record of my cases from the commencement of its use, which would now include many hundreds.

But several practical questions arise in discussing the propositions which I have submitted, and amongst them—

1st. Should chloroform be administered in *every* case of labor? No. There are some cases of labor in which the pain is insignificant; some cases in which there is no pain.

I have several patients in my clientêle who, in repeated

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labors, have assured me that the process in no stage was painful; that the sensation amounted to nothing more than an evacuation of the bowels when somewhat constipated. In others the pain is so slight as to require no alleviation, and the process of delivery so prompt as to call for no interference. Such exceptionally happy cases need no further blessing. But such happy cases are indeed exceptionable. As a rule, labor may well be termed, as it has been ever termed an *agony*, from the Greek—a struggle, as if in the pangs of death. Such pain appeals to every human heart for help, and every human instinct impels us to render it. Not only so, but the rational requirements of sound practice demand that we arrest at once this fearful pain—this terrible irritation of the terminal nerves of that tender organ, which, to the woman, is the throne of the sympathies. *Ubi irritatio, ibi fluxus;* and what fatal changes wait upon those processes, so easily and rapidly converted from the physiological to the pathological! Dr. Dickson, of Charleston, used to say that he struck at pain, wherever he found it, as he would strike at a snake. Both are enemies of the human race—hereditary, traditional, implacable and mortal. Kill the pain if you would save the patient. And what will kill it so quickly, so thoroughly and so efficiently as chloroform? In an instant you transport the sufferer from the throes of martyrdom into the ecstacies of the blest.

2ndly. Another practical question:—

At what time or in what stage of labor should we commence the exhibition of chloroform? Certainly not until labor has surely and unequivocally commenced—not until the lips of the os have thinned out and the process of dilatation begun—not for those dragging, nagging pains, aggravating and distressing, but not genuinely the pains of labor, only the precursor of those pains, and partaking more of the nature of neuralgia of the sacral plexus and its diversified connections. Chloroform, of course, would nullify these pains, as it does all other pain when it is pushed to its limits. But we do not propose to administer chloroform for neuralgia, simply. For these pains, we are in the habit of relying on bromide of potassium and hydrate of chloral—twenty

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grains of each every hour, if necessary to secure relief—the former agent for its especial action upon the spinal centres and the basil ganglia; the latter for its effects upon the higher centres of cerebral origin—a combination of rare power, and one which has seldom disappointed me. Chloroform administered in this precursory stage does retard the labor, and sometimes complicates it. But exhibited when the dilatation of the os has clearly begun, it facilitates this process, hastens its completion and obtunds or makes endurable these trying pains, which inaugurate and accompany the first stage, and which many women declare to be more distressing than the throes and agony of the second stage. And in the first stage it is not always, indeed not often, necessary to push the anæsthetic to the induction of unconsciousness. In wonderfully small quantities it assuages these pains so that the woman bears them with patience. In this stage it should be given intermittently—given when the pain comes on, and be taken away when the pain is off. Should the os prove especially stubborn and refuse to dilate, then chloroform, to the extent of inducing complete anæsthesia, will often relieve the difficulty by bringing on relaxation of the circular fibres. It will generally do so and obviate the necessity of either antimony or venesection, even in the plethoric and full-blooded. It will rarely fail to do so if preceded by the full dose of chloral and bromide of potassium.

And now, when the first stage has terminated, when the os is fully dilated, and the head or breech of the fœtus commences its descent into the pelvic cavity, a condition of things which the experienced accoucheur can often recognize, without vaginal examination, by subjective symptoms, by a sort of a lull in the storm, the woman experiences, as a rule, a temporary relief, and often falls into a short sleep—very short it may be, but very refreshing. In this state, we too may dispense with our anæsthetic for a short time. Take away the chloroform. Some women, in whom the expulsive pains of the third stage are merely expulsive efforts, and not pains, and who do not dread this stage of labor at all, call for the chloroform no more. Of course, in such cases its use is not necessary, and, if not necessary, of course, not judicious.

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But, unfortunately, such cases are not often found in the obstetric chamber. Generally, when the hard head commences its downward career through the pelvic arc, pushing along, crushing along, against the irritable nerve plexus lining that sensitive channel, and caught by a resistant perineum, is hurled back time after time, then the true agony is begotten, which calls for human sympathy and demands human help. What heart so hard as to withhold chloroform in that hour of bitterness and dispair! And in that last fearful pain, invoked by a long suffering perineum, just as its last attenuated fibres are stubbornly yielding to the force of those final throes, which threaten, in their violence, the very dissolution of nature, who can stand idly and unmoved, as a spectator, and yet know that he holds the remedy in his hand? Not I. Nor am I satisfied to assuage that suffering. I abolish it. Chloroform, then, as the bleeders say, *ad deliquium animi.* I give it to full unconsciousness. Nor have I ever seen it arrest or delay the labor in this stage. I have often thought it gave full play to, if it did not increase the expulsive pains or expulsive efforts at the last. At the same time it relaxes the perineal tissues and diminishes the danger of rupture. I have never, except on one occasion, seen a torn perineum under the full use of chloroform, and that accident occurred from the careless handling of a pair of forceps. I can only account for this fact of muscular relaxation and tissue relaxation under the use of chloroform, and yet with persistent and increased uterine action, on the ground that the diminished sensitiveness of animal function more readily permits, if it does not increase organic or ganglionic action.

I have had a patient say to me, "Doctor, give me chloroform enough *to prevent my feeling the pain*, and I can bear *down much better. I can't help bearing down.*" What does that mean and what does that teach? The most striking illustration which I have ever had of this fact, however, I derived from the case of a lady whom I once attended in a state of intoxication. She had had, at a previous labor, a most painful and tedious delivery, and some wise person had told her, that if she would drink half pint of the best whiskey just as the labor begun, "that she would not get drunk, and

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yet would not feel her pains." I was called to her about fifteen minutes after she had taken the whiskey, and was told by the nurse what had occurred. She was even then too much under the influence of the potion to speak to me, and soon after was in that semi-comatose condition known as dead-drunk. An examination revealed the os dilating, and every stage and process of labor was consecutively and regularly developed and completed in the space of six hours. And yet, with the exception of uterine dilatation and contraction, and general muscular contraction attendant on the expulsive stage, there was no more manifestation of animal life in the patient than is seen in the delivery of a manikin. Not one cry or sound was made, nor was there the slightest facial expression of pain or of any other emotion, during those long six hours, nor for the six hours following; nor when, after some difficulty, she was finally restored to consciousness, did she remember one single incident of her accouchement, except, that on "a friend's advice she had drunk the liquor, after preparing her bed." I had attended this lady before, and I have several times attended her since, but I have never known her to have so safe and so exceptionally a normal labor as on that occasion.

I do not mean, of course, by these remarks, the anæsthetic which she adopted, or to commend the use of any anæsthetic to the extent to which she carried it, but to draw the inevitable conclusion, that anæsthesia, even to the utter abolition of all signs of sensibility, may be safely induced, and that it does not necessarily arrest, or retard the obstetric process. More than this, it does not prevent, but does in my experience incite firm uterine contraction; sometimes to an unpleasant extent in the third stage of labor, therefore *diminishing* the risk of *post partum* hemorrhage by expelling uterine clots and facilitating uterine involution. Of course the exhibition of the anæsthetic ceases with the termination of the second stage, or with the birth of the child, except in cases of puerperal convulsions, where it is again the sheet anchor of the accoucheur. I know of no remedy which can replace it.

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It has been recommended in hour glass contraction with retention of placenta, but from theoretical reasons, I should prefer in such cases the *nitrite of amyl.* I have no practical experience with either in such a complication.

By the use of the word anæsthetic I wish to be understood as meaning chloroform—pure chloroform—such as that prepared and furnished the profession by Dr. Squibb, of Brooklyn. I think it vastly superior to sulphuric ether in obstetrical practice, for the reasons: 1. That it requires a much smaller quantity of the agent to induce the same degree of anæsthesia. 2. That it acts in a much shorter time. 3. That it acts with more certainty. 4. That it is not so often followed by the nausea and vomiting which are so frequently the results of the use of ether. 5. That it does not so often act a stimulant, inducing that peculiar intoxication or hysterical excitement which is common in the exhibition of ether.

I have been surprised, however, to read in a note by the American editor of Playfair's *Midwifery*—(last edition, text cited before, p. 291):—"In the United States *chloroform* is rarely used in *obstetric practice* as compared with *pure sulphuric ether;* and *anæsthesia* is much less frequently *practised* than it was soon after *its introduction.*" This certainly does not accord with my observation or experience. I cannot undertake to speak as he does for the whole "United States." But I am sure that when he speaks for this reconstructed portion of rebeldom, he speaks without the book. In general surgical practice, we use less pure, or rather less *unmixed* chloroform, preferring in many instances either the washed ether, or a mixture of that with chloroform and alcohol; but we have not discarded, even in general practice, the use of pure chloroform by a large majority. In obstetric practice, I do not know of one physician who uses pure ether. I have occasionally (twice) used it, for the reason that it was not convenient to procure the chloroform, and the ether was at hand. But I saw and see no especial advantages in the use of ether, but the marked disadvantages which I have enumerated. Besides, if, as the Editor before referred to contends, inertia of the womb does occasionally follow the

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exhibition of chloroform, it also follows, according to his own showing, the exhibition of ether likewise (loc. cit., p. 292), and we are not the more apt, therefore, to have *post partum* hemorrhage after the one than after the other. In addition, though under the use of chloroform in general surgical practice many a death has occurred, or rather been published, who has witnessed or recorded a death from the use of chloroform in obstetrical practice?

Now, whilst I am unwilling, in this discussion, to array myself anywhere except on the side of safety and conservatism, yet, before the annunciation of the American Editor of Playfair's *Midwifery* be accepted as authority, I would be glad if the profession at large would generally and earnestly inquire into the truth of the propositions that I have submitted.* And if woman is to be robbed of this inestimable boon in her hour of agony, and the lying-in chamber is to be reconverted into the hall of torture, let me meet her there, with the painful and sorrowful assurance that wiser men than I have dictated, that she must submit to the irrimediable and the inevitable.

30 *Union Street.*

ART. II.—**Some of the Later Points on Diphtheria.**† By WILLIAM H. COGGESHALL, M. D., Richmond, Va.

RELATIONSHIP BETWEEN SCARLATINA AND DIPHTHERIA.—Dr. George Welch, of New Jersey (*N. Y. Medical Record*, July 7, 1883), offers to the profession a carefully written consideration of this subject, accompanied by some clinical reports bearing on points brought out in his paper. He believes that the relationship is very close indeed, amounting almost, if not quite, to there being the two names for one

*While the Editor of the *Medical Monthly* has seen references to the use of ether as an anæsthetic in labor, he knows of no one among his acquaintances who does not prefer and adopt chloroform.

† Presented before the Medical Society of Virginia, at the Fourteenth Annual Session, at Rockbridge Alum Springs, September 6, 1883.

The information contained in this portion of my report on Diseases of Children has been gathered mainly from the medical journals of the past year, and although it may present little that is really new to the profession, yet it is hoped that it may have some value as showing some of the later thought and opinions upon this debatable subject.

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disease. He says, "All the older writers acknowledged a relationship between them, and while diphtheria has had an authentic history of two thousand years, scarlatina was never separated from it until within these last three centuries, nor given a name until Sydenham stood sponsor in 1676. We refine upon the ancients, but disease is a gross Caliban that constantly escapes his boundaries."

At the present day the best authorities differ slightly, most of them teaching that the two diseases are distinct, but closely allied in symptoms. DaCosta says, "Diphtheria and scarlatina are certainly allied but not identical; for the poison of one leads to a cutaneous rash, and leaves a protective influence against a second attack, but often also deafness, suppuration of the glands of the neck, and dropsy—phenomena which are not encountered in the other. Moreover the exudation is not exactly similar in the two diseases. In scarlatina it is pultaceous and not coherent, and has no tendency to spread to the respiratory passages."

It is the opinion of Austin Flint that in some severe cases of scarlatina anginosa, the pharynx offers all the characters of diphtheritic inflammation.

Alonzo Clark, in his lectures on diphtheria, gives the details of a remarkable case where diphtheria attacked the child, then gave way to scarlatina, which was closely followed by measles, the original disease, diphtheria, then returning with fatal result.

Henoch firmly denies the complication of diphtheria with scarlatina, but he confines the use of the term diphtheria to a specific morbid process, and acknowledges that what he calls "necrotic inflammation" may be, and frequently is, present in scarlatina, attacking the pharyngeal mucous membrane.

Dr. Welch, in the article before mentioned, adds his own observations of the disease complication, and sums up by asking the following questions: Might it not be the same disease we call scarlatina when the symptoms are mild and the effloresence well developed? scarlatina anginosa when the eruption is obscure and throat direfully inflamed with pultaceous deposits on tonsils and pharynx? diphtheria when

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the deposit is organized and extending above and below with frightful impetuosity?

Relationship Between Membraneous Croup and Diphtheria.—Many authorities contend that there is complete identity between these two diseases, that even the former is sometimes accompanied by a contagion giving rise to severe cases of diphtheria, and that in both morbid conditions micro-organisms are the pathogenic cause; and, during the discussion ensuing upon the reading of a paper on the "Unity of Membraneous Croup and Diphtheria," by Dr. Alex. Harris, at the American Medical Association meeting of 1883, there was to be seen the usual disparity of views on the subject, although it appeared that a majority of the physicians present granted a very close relationship.

It will probably be a long time before the profession generally will be agreed upon the subject, and every means presented to facilitate our knowledge and thought upon the question should be closely examined and carefully studied. Dr. Crouch, of Michigan (*Medical Age*, July 25, 1883), formulates in a very clear manner the differences in morbid anatomy and symptomatology discoverable between the two, although perhaps exception may be taken to some of his views as presented in the following:

"1. Croup is sporadic; diphtheria epidemic.

"2. Croup is non-contagious; diphtheria is contagious.

"3. The pseudo-membrane in croup is strictly *upon* the mucous membrane; in diphtheria it is not only upon, but infiltrated and sub-mucous.

"4. In croup we have to deal with a local disease; in diphtheria with a constitutional.

"5. In croup we have causation: (*a*) constitutional tendency, (*b*) vicissitudes of temperature, (*c*) the inhalation or swallowing of irritants; in diphtheria (these do not act as causes), exposure to the *materies morbi* only.

"6. The pseudo-membrane in croup has, I believe, never been known to invade other parts; in diphtheria it may be found on almost any delicate surface, as the lining of the external ear, the vagina, under the prepuce, conjunctiva, stomach, and on the cutaneous surface, if denuded or cut.

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"7. The most important difference is found in the state of the blood after death."

ETIOLOGY OF DIPHTHERIA.—The question as to whether or not there is a definite disease germ producing the morbid condition which we call diphtheria, is a subject of considerable investigation among pathologists and microscopists yet, with no point so far actually decided. Henoch, of Berlin, one of the best German authorities on diseases of children, does not believe in the existence of specific bacteria spirilli. Apart from the doubtful fungoid character of all the finely granular masses which have been described as diphtheritic germs, he thinks it must be acknowledged that the germs floating in the atmosphere will develop and multiply most rapidly in parts which are impregnated with the products of decomposition, and that they may be carried thence to more deeply situated, even remote parts, by the current of lymph or blood, but they appear to him to stand in no connection with the nature of the disease.

A certain number of the microscopists of the day believe in the demonstrable existence of a specific diphtheritic poison germ, notably, Drs. Salisbury and Cutter of our own country, who claim to have discovered the presence of the *mucor malignans*, which they hold to be characteristic, and the specific cause of diphtheria and scarlatina; but the general inference to be drawn from the fact that microscopic examination of the membrane by most observers shows no point of difference from the exudate produced by the application of ammonia or other chemical irritants, and from facts deduced from general clinical observation, is, "that the diphtheritic virus is of a gaseous and intensely irritant nature, producing, by contact with the throat, an intense local inflammation, and capable, under a favorable condition of the parts, of direct entrance into the circulation, where it operates to the direct disintegration of the blood."

An original theory of the etiology of diphtheria has been lately advanced by Dr. Woakes, of England, (*Lancet*, Mar. 17, 24, 1883.) who considers the disease to be a simple neurosis arising in persons deficient in vascular tone; in fact, an atonic inflammation. His history of the production of a

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case may be condensed as follows: A child is in an exhausted nervous state (extremes of climate and temperature being notably accountable for this), and the vaso-motor control is consequently lowered. The patient is then exposed to some strong peripheral irritation or shock, like a sudden draught of cold air. The impression so produced is conveyed by the afferent fibres of the sympathetic in the pharyngeal mucous membrane to their central cells in the superior sympathetic ganglion, and through these exhausted centres produces a vaso-inhibitory action by means of the efferent sympathetic fibres going to the pharyngeal vessels, manifested by a catarrhal exudation, the precursor of diphtheria. The substance of the theory is that a simple catarrh differs from a diphtheritic attack only because of the difference in degree of pre-existent vaso-motor paralysis. For if the process ends as catarrh, it implies that the patient was previously in ordinary health as regards his nerve power, when the rebound from a state of vessel dilatation to one of equilibrium is rapid and complete." The more advanced and positive the condition of vessel paresis the more severe the attack of diphtheria, and *vice versa*.

Original as this theory is, it is not at once so simple and comprehensive as that of Dr. Reiter (*Therapeutic Gazette*, Nov., 1882), who believes that the cause of diphtheria is the failure of the liver to destroy fibrin as it normally should. Obviously, therefore, he cures all cases by means of large doses of calomel.

The question whether diphtheria is a local or a constitutional disease is discussed much as usual in the medical journals of the year, with the usual indicisive result, and each practitioner believes in the one or the other, according as his clinical observation and recent personal experience have inclined him.

No experienced physician, though the sternest advocate of the local origin of the disease, but will concede that constitutional disturbances may be violent before any local trouble is discernible; and on the other hand, the existence of a pseudo-membrane on the pharynx, without the slighest rise of temperature, acceleration of pulse, or any other symptom

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of systemic disturbance, is so frequent that it may be said to constitute a large percentage of the cases met with during most epidemics. It seems most evident that whether diphtheria is primarily a constitutional disease with local symptoms following, or strictly a local affection with an occasional induced systemic disturbance, or whether it remains, as it sometimes does, a purely local disease, appears to depend upon some anatomical peculiarity, or some special physiological susceptibility on the part of the patient attacked.

At a recent meeting of the New York Pathological Society (*New York Medical Record*, November 18, 1882), Dr. J. Lewis Smith, from his large experience with the disease, deduced the following reasons for his belief in its constitutional origin: In certain malignant cases the kidneys are affected as early as the second day. Some cases have an incubation of six or seven days. In severe cases local treatment early and perseveringly applieed does not prevent blood-poisoning.

Collective Investigation of Diphtheria.—The editors of the *Therapeutic Gazette*, early in the present year, conceived the original idea of making what they called a collective investigation of diphtheria, and in pursuance of the plan, they printed in the March number of that journal a series of eight questions on the subject of the disease, to each one of which they requested a clear and practical reply, based on personal experience, from any physician to whom that copy of the journal should be sent. The number of answers received serves to show something of the surpassing interest taken by the profession generally in the discussion of this disease, practitioners in twenty-five States of the Union replying at full length, not a few of the names attached being recognizable as those of gentlemen of national reputation. After a careful examination of the letters so far published, I think the following summary of conclusions reached, printed in the *Therapeutic Gazette*, July, 1883, is just and impartially rendered.

1. "Diphtheria may be either local or constitutional in its origin.

2. It may continue either as a purely local or as a purely constitutional disease, or the local disease may be followed

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by constitutional affection, or *vice versa*—the disease in the vast majority of instances manifesting itself in both the constitutional disturbance and the local affection.

3. The comparative value of local and constitutional remedies is dependent upon the nature of the affection in individual cases.

4. Diphtheria is a contagious disease, but not liable to attack a healthy mucous membrane or find an entrance through it into the circulation.

5. The contagium of diphtheria is not a micrococcus, nor is it visible under the most powerful microscope yet manufactured.

6. The contagium of diphtheria is of a gaseous nature (the result of decomposing fæcal and other organic matter), and can be neutralized only by a true disinfectant and not by an antiseptic.

7. The best local application is the tincture of the chloride of iron. It may be supplemented by other applications according to the indications in individuals cases.

8. In a typical case of sthenic diphtheria, administer large (10 grains) and frequently repeated (hourly) doses of calomel until the characteristic stools are secured. Following this, give large doses of the tincture of the chloride of iron every two hours, and administer alcohol within the limits of intoxication. In asthenic cases the calomel should be omitted and the main reliance placed on the iron and alcohol."

TREATMENT OF DIPHTHERIA.—There is perhaps no other disease the treatment of which has been so varied and changeful as diphtheria; not a year, hardly a month, passes without the announcement of some newly discovered remedy, which has produced in the experimenter's hands the most wonderful of results, and which on further trial proves lamentably deficient in checking this dread disease. One need not go far to understand the reasons for the frequent disappointments in the employment of some enthusiastically vaunted specific. In the first place, many practitioners have fallen in the habit of calling all forms of follicular inflammation of the pharyngeal region by the name of diphtheria, and whatever the drug used when a healthy condition of the

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mucous membrane supervenes, receives the credit of being a specific. Again, the disease, governed probably by local conditions as yet beyond our understanding, does occasionally, without doubt, assume a controllable form, under treatment, which, in the next case or epidemic will prove entirely futile. It may safely be stated as a broad fact, that no one remedy can be relied upon as being in itself a specific; yet there are certain indications for treatment which should not be lost sight of. From what knowledge on the subject we so far possess, the poison of diphtheria is a gas, or a gaseous combination, probably produced from the decomposition of organic matter, and in such case a true disinfectant should be topically used. There are many such to choose from, and the tincture of the chloride of iron is not only that, but also an astringent, through which latter property it tends to allay the inflammation and diminish the absorptive power of the mucous surface with which the virus of diphtheria lies in contact.

According to Dr. J. M. Gibbs, of New Zealand (London *Lancet*, Feb. 24, 1883), all indications of a true disinfectant are fulfilled in eucalyptus globulus, or blue-gum. He uses in diphtheria a steam produced by pouring hot water on blue-gum leaves; and during an epidemic he treated thirty-seven cases, some of which the clinical history shows to have been attended by very severe symptoms, and in every instance recovery followed his plan of treatment, no paralysis or other after effects ensuing in any case. He used no stimulants, and no internal medication save an occasional dose of castor oil, relying entirely upon the blue-gum steam.

Dr. D. M. Cool, of Iowa (*New York Medical Record*, June 23, 1883), writes that after years of practice in Chicago, Ill., after trying all the ordinary forms of local treatment in several hundred cases of diphtheria with the ordinary result of a large percentage of deaths, he began the use of pinus canadensis, and since his first trial of it has had only four deaths in a large number of cases of the disease, which four deaths he thinks were due to the fact that the remedy could not be properly applied. He has the patient's throat swabbed thoroughly with the extract once an hour during the day, and

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once in two hours during the night—Labarraque's solution internally in five-drop doses, every two hours, and the usual supportive treatment, being combined with the local treatment.

Boro-glyceride, the glycerole of tannin and carbolic acid, boracic acid, iodoform and starch, the bi-chloride of mercury, tincture of iodine and glycerine, bromine, petroleum, iodoform and balsam of tolu, pepsin and muriatic acid—some of them old remedies revived, and some of them used for the first time—have all been recommended for local employment during the past year, in the different medical journals, and each in the hands of its advocate produced none but the best results.

As regards the systemic treatment, the general testimony, and especially that collated by the *Therapeutic Gazette*, in favor of the employment of the tincture of the chloride of iron, alcohol and calomel, seems to the observer to stand out in strongest relief, and the reasons given are generally so plain and convincing that they are perhaps worth summarizing here.

There is no question but that the effect of the diphtheria poison is to deprave and disorganize the blood, and the natural question must be asked, what will remedy this condition? When we reflect that the known properties of iron are not only to augment the quantity of coloring matter of the blood corpuscles, but to actually increase their number, the question is answered. The preparation of iron mentioned has still another merit. Dr. Jacobi in his Treatise on Diphtheria says that it has been found that of all the preparations of iron, the chloride possess the power of stimulating the nervous system; this effect being possibly traceable to an increase of the arterial pressure in the nerve centres.

There is no one point in the treatment of diphtheria now more firmly established than that of the great value of alcohol, given freely and frequently, the good effect of which is undoubtedly due not only to its property of stimulation, but also to its influence in retarding body heat, and its power to retard tissue metamorphosis.. Dr. Mulheron, of Detroit, believes that its beneficial action is due more to the effects last named than to the stimulating properties it possesses.

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Exactly what the mode of action of calomel is, very few physicians who employ it successfully in the disease seem prepared to affirm, although Dr. Reiter, as before mentioned, claims that it acts by restoring the fibrin destroying function of the liver, which is suspended by the disease, thus producing an excessively fibrinous condition of the blood. He exhibited calomel in enormous doses, twenty grains to a child of eight years, followed by ten grains every hour until half an ounce is taken. Dr. Mulheron calls special attention to the point that the drug should be given only in cases of a sthenic type, and in those the administration should be stopped as soon as the stools assume the greenish color characteristic of free catharsis by calomel. The bi-chloride of mercury, which Dr. Sloan, of Penn., at the meeting of the American Medical Association, 1883, stated had always acted as a specific in his hands in diphtheria, and the virtues of which have been so highly lauded by others, also probably acts through its known power of decreasing the fibrinity of the blood, and diminishing its coagulability.

The late Dr. Beverly Robinson, of New York (*New York Medical Record*, May 5, 1883), recommended strongly the use of black coffee in diphtheria, especially early in the disease, and in the course of his paper asks the question, If the occasional formation of intra-cardiac fibrinous coagula is not sometimes due to the administration of large doses of the tincture of chloride of iron?

PROPHYLAXIS OF DIPHTHERIA.—Dr. Peyre Porcher, of South Carolina (*Medical News*, June 30, 1883), believes strongly in the possibility of preventing this disease from appearing in other members of a family or household, where one has been attacked, by the use of the following, which he has employed with the best results during years past:

℞. Potass. chlor.....ʒj to ij.
Tinct. ferri mur.....ʒij to iij.
Quin. sulph.....grs. xv to xx.
Sodæ hyposulph.....ʒj to ij.
Alcohol.....ʒj to ij.
Aq.....ʒvj. M.

Sig.—A teaspoon to a dessert spoonful, in a little water, to

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be used two or three times a day by those *exposed* to the contagion.

During the past year Dr. Porcher has advised the addition of one-fifth to one seventy-fifth of a grain of the bi-chloride of mercury to each dose, on account of the powerful germicide property of the drug.

In this connection it may be of interest to mention the prophylactic mixture that Dr. Milner Fothergill advises to be used by the attendants upon patients suffering from any form of acute blood-poisoning. He directs that one ounce of chlorate of potash, and the juice of two large lemons be added to one quart of good wine; after the solution is complete, a wineglass of the mixture should be taken three times a day.

For much of the information derived in the preparation of the above paper indebtedness is due to the medical journals of the past year, and to the following volumes: Henoch, "Lectures on Diseases of Children"; Jacobi, "Lectures on Diphtheria"; J. Lewis Smith, "Diseases of Children"; Chas. H. Goodwin, "Treatment of Diseases of Infancy and Childhood;" and J. Milner Fothergill, "Aids to Rational Therapeutics."

Clinical Reports.

Successful Extirpation of Tumor over the External Jugular Veins. By C. C. DUFFY, M. D., Norfolk, Va.

J. R., a female, from North Carolina; age, about twenty-three years; occupation, a nurse; came to me in March, 1882, with a tumor on her neck, which she wished to be removed. On examination I found a fatty tumor of the variety described by Müller as the cholesteatoma, located on the left side of the neck, below and posterior to the angle of the inferior maxilla, resting on the sterno-cleido-mastoid and apparently enveloping the external jugular vein. The size of the tumor was about as large as a duck's egg, hard, and of about three years' growth.

I appointed the 22d day of the same month to operate, and on that day met, by appointment, Dr. James D. Galt, an ex-Surgeon of the Confederate States Army, to assist me.

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After he examined the tumor, however, and found the close relationship existing between it and the jugular, he disapproved of the proposed operation, and declined emphatically to assist me, on account of the great danger to life attending the operation. It was quite a disappointment, because all my arrangements were made, and I was afraid his declining would cause the young woman to abandon entirely the operation. It had no effect on her, though, I am glad to say, and she insisted upon having the tumor removed, no matter what the consequences might be. I invited him to come back at 4 o'clock P. M. and witness the operation, if he would not take part in it.

In the meantime, I secured the services of my young friends, Drs. E. V. Newton and J. M. Galt, and at 3:30 o'clock we repaired to the house, and got everything in readiness by 4 o'clock. After waiting until 4:30 o'clock, the woman was put under the influence of chloroform, and just as I was about to use the knife, our friend stepped in, in time to witness the operation, which he complimented very highly, and congratulated me upon my success in removing the tumor without an accident.

An incision was made parallel to the sterno-cleido-mastoid muscle over the long axis of the tumor and dissected out, leaving quite a cavity, with the jugular, as it were, drawn across the centre.

The tumor had the appearance of having had a groove made deep into it, so prominent were the sides which dipped deep down on each side of the vein.

There being no blood vessels to tie, pressure and torsion having stopped the hæmorrhage, the wound was closed with silken sutures, waxed thoroughly and dressed with carbolized oil. A compress and bandage was then applied, so as to keep all sides of the wound in contact, and by that means assist the process of healing by first intention, which was accomplished. There was not a drop of pus formed in this case, not even about the sutures, which were not removed until the tenth day.

Medical Books in Courts.—Medical books cannot be read or quoted from by witnesses, or used by lawyers in their arguments on a criminal trial in the courts of the following States: Indiana, Maine, Maryland, Massachusetts, Michigan, North Carolina, Rhode Island, Wisconsin, California and New Hampshire. So says *Detroit Lancet*, Oct., 1883.

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Original Translations.

From the German and French. By WM. C. DABNEY, M. D., Charlottseville, Va.

Pleuro-Pulmonary Congestions of Reflex Origin due to Ovarian and Uterine Disturbance.—At the recent meeting of the French Association for the advancement of science, Prof. Potain read an interesting paper having this title. He stated that the troubles to which he referred were not referable to the puerperal state, nor were they due to the general health of the patient, nor to a metastasis through the lymphatic system. They occurred in young subjects at the time of their menstrual periods, and might, or might not, be directly induced by "moral perturbations." The woman complained, first, of pain in the abdomen, especially in that part of the peritoneum surrounding the utero-ovarian structures; then they experienced a new kind of pain in the chest, which was accompanied by chills and fever. On auscultation, the signs of pulmonary congestion were readily appreciated, and sometimes there was added to this a fine dry crepitation, indicative of pleurisy; occasionally, at a later stage, there were evidences of some pleural effusion.

The rapid disappearance of these symptoms in all cases shows that they are of very little gravity.

As the menstrual flow is not suppressed, M. Potain did not think the symptoms could be caused by increased blood pressure, and inasmuch as the pulmonary and pleural congestion were always on the same side with the ovarian trouble, he thought they were of reflex origin. This view seems the more tenable from the fact that these congestions sometimes alternate with urticaria and purpura, which seem to be due to ovarian and uterine disturbance also. In conclusion, he states that he has been led to the belief that uterine and ovarian congestions may give rise to similar congestions on the same side of the body with the affected ovary by reflex action, and that among these fluxions the pleuro-pulmonary are often the most marked.—(*Le Progrès Médical*, September 8th, 1883.)

Injections of Medicated Substances into the Trachea.—At the same meeting M. Bergeron read a paper on the injection of medicines into the trachea. He stated first that the injections of liquids into the tracheæ of cows, horses and dogs was very well borne by these animals, and gave rise to no

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disturbance. He went on to state that it was possible to make similar injections into the tracheæ of human beings without danger; he had, in one case, used twenty-five such injections in thirty-five days in a phthisical patient, the object being to allay cough. It was necessary that the patient should be lying down, as otherwise fainting might be induced.

M. Potain recalled the fact that Claude Bernard, as a result of experiments on animals, had stated that the air passages might be rendered serviceable for the absorption of medicines, and a naval surgeon had once administered quinine in this way for pernicious fever with success.

The direct injection of medicines into the diseased lung was a way of applying remedies which had been recently proposed and practised, though it was true, he said, that as yet the success had been very slight, so far as the cure of cavities was concerned; indeed, nothing seemed to do any good in those advanced cases, but efforts in this direction should not be abandoned.—(*Le Progrès Médical*, September 8th, 1883.)

Free Hydrochloric Acid a Stomach Digestion.—Several articles bearing upon this subject and in which very singular views are advanced, have recently appeared in Germany. In *Le Progrès Médical*, for September 15th, is a review of several of these papers by Dr. E. Vogt, from which we take the following abstract:

Dr. Von Velden, by whom these experiments were first instituted procured the contents of the stomach by the use of Kussmaul's pump. The results of his investigations are very interesting, and if confirmed by further investigators, will be of great practical importance.

In a case of typhoid fever, he found that the free acid was absent during the whole course of the disease; but it reappeared during convalescence. In simple dilatation of the stomach, the acid was never absent. In cancer, on the other hand, it was invariably absent—so invariably, indeed, that in one case the diagnosis of cancer (which was confirmed by an autopsy) was made when no other symptom was present. Why this change should occur in cancer he could not determine; it was plainly not due to the cachexia, for persons in the last stage of marasmus, but who had not cancer, preserved the free acid in the gastric juice, while it was absent in carcinomatous cases, even when the patients were improving. In one case, where the liver was affected and not the stomach, the acid did not disappear.

In another series of researches he found that the saliva,

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which passed into the stomach, only acted on the starchy food when the free acid was absent, and that this latter did not make its appearance for an hour and a-half or two hours after eating, a fact which had previously been remarked upon by Lehmann.

Opponents to these views of Von Velden have not been slow in making their appearance. Ewald has criticised his methods of experiment, and denies the conclusions at which he arrived.

Edinger has found the free acid to disappear in two cases of amyloid degeneration of the mucous membrane of the stomach, and is, hence, inclined to attribute the disappearance of the acid to an endarteritis obliterus. Instead of using Kussmaul's pump, this experimenter used a modification of an old method of obtaining gastric juice—namely, he caused the subjects of the experiments to swallow a small piece of sponge, to which a string was attached by which it could be withdrawn; the modification consisted in enclosing the sponge in a gelatine capsule, which was promptly dissolved after reaching the stomach.

Intestinal Occlusion Due to a Biliary Calculus Impacted in the Rectum.—A very singular case of this kind was reported to the Société Anatomique not long since by M. Babinski. (*Le Progrès Médical*, September 15th, 1883.) A man, fifty years old, entered the Hotel Dieu, in the service of M. Vulpian, on February 8th, 1883. No satisfactory history of the patient could be obtained; he was admitted at 10 o'clock P. M., in a state of partial stupor, but his face expressed suffering. His temperature was normal and his pulse small and compressible; his abdomen was distended and painful on pressure; he suffered very much from dyspnœa. On being questioned, he stated that his bowels had not moved for four days, and that during that time he had passed scarcely any urine. The patient died at 4 o'clock next morning—just six hours after he entered the hospital.

On opening the abdomen, the coils of intestine were found to be much distended, and a hard body was found in the upper part of the rectum at the junction of the upper and middle thirds. On opening the bowel this singular foreign body was found to be imprisoned by the intestinal mucous membrane, which was tumefied but not ulcerated. It was cylindrial in shape, measuring two and one-half centimetres in one direction and one and one-half in the other. It was composed of cholesterine. The whole of the large intestine was filled with fæcal matter, and two other small concretions,

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also consisting of cholesterine, were found just above the large one. The gall bladder was adherent to the transverse colon, and there was quite a large opening between them, through which the gall stone had found its way into the bowel. The bile duct was a little larger than usual, but presented no unusual appearances and contained no calculi.

There was nothing about the other organs to attract attention.

The Treatment of Saccharine Diabetes by Bromide of Potassium.—On the 28th of August last, M. Dujardin-Beaumetz presented to the Académie de Medicine a review of an article having this title, by M. Felizet. The subject itself is not a new one, but M. Felizet's paper and the discussion to which it gave rise are of interest.

The treatment of diabetes mellitus by bromide of potassium is in keeping, according to Felizet, with theoretical considerations and the results of experiment and clinical observation. He refers briefly to the three views which have been entertained with respect to the pathology of the disease, namely, the "alimentary" theory, the "hepatic theory" and the "nervous theory." Bromide of potassium suggests itself to those who adopt this latter view of its pathology.

It is unnecessary to refer to the experiments of the author of the paper in cases of artificially produced glycosuria. He reported, however, twenty-nine (29) cases of diabetes or more in which the sugar disappeared from the urine after the use of the potassium bromide, and he mentions that M. M. Hérard and Dreyfus-Brisoc have obtained good results in many cases.

In M. Felizet's case, however, bodily exercise, alkalis, and in some cases quinine and arsenic were resorted to in addition to the bromide, so that it cannot be determined with any certainty how much of the good effect obtained in these cases was due to the latter drug. He states, moreover, that it is only in cases of moderate severity that benefit followed its use; in severe cases, no good resulted, whether the agent was given alone or was associated with other means of cure. He acknowledges, furthermore, that considerable nervous depression may result from the use of the bromide, and that in order to avoid this action exercise should be insisted upon. He suggests that some of the other bromides might give as good results, and might be free from the injurious properties of the potash salt. In conclusion, he states his belief that the bromide of potassium is an agent of some value in diabetes mellitus, but that it is necessary to use it with prudence.

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M. Dujardin Beaumetz agreed with this statement, but added that the agent was often too depressing and debilitating to be used even in cases in which it would seem to be indicated otherwise.

M. Bouchardat was fully in accord with M. D. Beaumetz with respect to the depressing action of the salt in diabetes, and he stated that it was impossible to say how much good was done by it in the cases reported by M. Felizet.

M. Hardy had used the remedy in three cases apparently with some benefit, though in one case its use had to be suspended. He reminded the members of the Academy that bromide of potassium, when given in large doses, and for some time, gave rise to an eruption of acne, and he said that this eruption increased very considerably in tendency to boils, which is always present in cases of diabetes.

M. Ricord said that he had given the bromide in seven or eight diabetetics, in doses of two, three, or even four grammes, and had never seen any depression or debility therefrom; on the contrary, he had obtained excellent results.

The Treatment of Tumors by Parenchymatous Injections of Per-osmic Acid, by O. Pfeilsticker, *Centralblatt für Chirurgie*, 1883, Nov., 1882. Delbnstailli's suggestion of the use of parenchymatous injections of per-osmic acid for the cure of tumors has recently been tried in the Tubingen clinic in a number of cases without the slightest benefit in any. The quantity used was one-half or one-third of a syringe full of a one per cent. solution. It was used in four cases of multiple tubercular lymphomata, in one case of malignant lymphoma of the neck, and once for an œdematous tumor (ödem) of the thorax, the size of a man's fist. There was scarcely any perceptible change in any of the tumors which were subjected to this treatment, except that the skin became adherred at the point of puncture. There was no diminution in the size of the morbid growths, and it was found necessary afterwards to resort to excision on account of the involvement of surrounding tissues. A microscopic examination of the tumors after removal showed that a coagulation of albuminous products had occurred at the point where the acid was injected with subsequent necrosis in a limited space, but no results of practical importance had been obtained, and the conclusion reached was that the remedy was of no practical benefit.

Injections of Medicines into the Substance of the Uterus, by Adman Shücknig-Pyrmont (*Berliner klin. Wochenschrift*, 1883, Nov. 27.) After referring to the fact that injections into the tissue of the uterus itself have been seldom practised,

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the author of this paper says they are to be advised whenever hypodermic injections are rendered necessary on account of uterine affections.

He mentions as most important the injection of ergot to control hemorrhage, or to cause a diminution in the size of uterine fibroids. There is a contraction almost immediately caused by the irritation of the needle when it is inserted. But besides this the effect of the ergot is more prompt and decided when it is inserted directly into the substance of the uterus than when hypodermic injections are made in other parts of the body.

In four cases of fibroid tumors of the uterus the hemorrhage was very much lessened after six, ten and twenty injections, respectively, and in all cases the tumors ceased to grow, while in one there was a considerable diminution in size. Then another class of cases, in which these injections do much good, according to the author, is that in which the womb remains in a condition of sub-involution, and there is great relaxation of the surrounding parts.

Ergot is not the only drug, however, from which he has seen good results; Fowler's solution of arsenic has been found of decided service. In one case, when the uterus was enlarged and retroverted and prolapsed, its ligaments being made relaxed, a cure was obtained after fourteen injections of Fowler's solution, in fifteen drops of water—being injected three times a week. In this instance, pessaries had been faithfully tried without avail, but under the arsenic treatment the uterus returned to its normal size, and when placed in its normal position it showed no disposition to leave it. In another case the arsenic produced a favorable result, after injections of dialized iron had failed. It is not very clear what the *modus operandi* of Fowler's solution is in producing this result. Two or three views may be advanced, but it is impossible to say which is right: (1) The arsenic may act as an irritant and set up retrogressive changes; (2) there may be a sort of necrosed spot found at the point of injection, which thus causes a diminution in the size of the organ.

Finally the author mentions another agent—tincture of iodine—which he has found exceedingly useful in "hyperplastic" conditions of the organ. He suggests the possibility that a part of the benefit derived from injections into the uterine substance may be due to the little operation itself and the local bleeding which ensues, by which the congested condition of the organ is relieved.

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With respect to the operation itself, Dr. Shücknig-Pyrmont advises that the needle of the syringe be very long, so that the injection can be thrown deep into the substance of the uterus. If the injected fluid be pure and the needle properly disinfected with carbolic acid, no evil results will follow, even though the Douglas pouch be entered.

[Delore, of Paris, who claims to have been the first to use injections into the substance of the womb, stated at a meeting of the Société de Chirurgie (in January, 1888, I think), that in some of his cases troublesome symptoms, such as violent pain, chills, trembling, faintness, etc., were observed; these always passed off, however, without giving rise to any serious trouble. M. Duplay corroborated these statements.—W. C. D.]

Analyses, Selections, etc.

Weak Points in Listerism, and Advantages of Corrosive Sublimate as an Antiseptic.—Dr. Robert F. Weir, of New York City, Surgeon to the Bellevue and New York Hospitals, in an interesting article in the October number, *Annals of Anatomy and Surgery*, says, that the most devoted advocates of Listerism have been obliged to acknowledge that instances have been met with where the most careful and minute details of Listerian treatment have been carried out during an operation, and yet the results have been anything but what were to be expected. One of the reasons therefore may have been the fact that the strength of the carbolic acid solutions used was not what it should be. Mr. Lister for some reason recommends different grades of strength for the different solutions. He now employs; for the instruments, hands, etc., 1 part to 20; for the spray, 1 to 30; and for the sponges, etc., 1 to 40. According to the very carefully conducted experiments of Koch, it required a solution of at least five per cent. strength, to destroy the vitality of the *spores* of the authrax bacillus, although a much weaker solution killed the life of bacilli themselves that had not passed into the *spore* form. A repetition of the experiments, by Dr. Sternberg, of the United States Army, has shown corresponding results, as he found that the resisting power of reproductive spores was far greater than that of bacterial organisms in active growth; and the point to be made is, that it is impossible to know whether all of the pathogenic bacteria form

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spores or otherwise. To be on the safe side, it is always best that the quantity of carbolic acid to be used as a germicide should not be less than five per cent.

Another cause of error is perhaps in the imperfection of the dressings.

It has been found that gauze, impregnated after Lister's formula, and kept carefully secluded from the atmosphere, at the end of three months had lost nearly half of its carbolic acid; and Kopf, finding 2.61 per cent. of the acid in gauze two days after impregnation by Lister's method, found only 0.5 per cent. in prepared gauze purchased from the shops. The same examiner found 5.62 per cent. in gauze freshly prepared after Bruns' method. It is evident then that the best results are to be expected where Bruns' formula is used. (Resin, 400 grm.; carbolic acid, 100 grm.; castor oil, 80 grm.; alcohol, 2 litres.)

Another possible cause of failure in antiseptic dressing is encountered in the catgut ligature. Being made from the intestines of sheep, it is not to be wondered at that the possibility of infection has been seriously considered.

Several of the German writers, Koch, Zwiefel Kocher, Volkmann, and others, have called attention to this point, and some few cases of septicæmia have been reported as occurring from this cause, but the majority of operators so far have felt no danger from its use. A strong point to be made against the catgut ligature, however, is its unsatisfactory insolubility. Naturally somewhat insoluble in its nature, its durability in the living tissues has been increased by the later method of adding chromic acid and sulphurous acid to it, and the writer has found that it does not dissolve for twenty to thirty days, and that it frequently acts as a foreign body.

Although it is generally understood by the profession that the corrosive chloride of mercury possesses considerable value as a germicide and antiseptic, comparatively few are acquainted with the great field of usefulness it covers. The experiments of Koch and Sternberg show conclusively that no drug in the pharmacopœia is to be relied upon as producing anything like its effect on bacterial life. It is at least two hundred times more powerful as a germicide, than carbolic acid. According to Koch's table of results, a one per cent. aqueous solution of corrosive sublimate destroyed all bacteric life in one day, and Sternberg's results proved that the germicidal value of the salt was 1 part to 20,000, to equal that of carbolic acid 1 part to 100. The surgeons of Ham-

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burg, Kiel and Wurtzberg now employ the mercuric bi-chloride as a surgical dressing almost entirely, and Kummell, of Hamburg, reporting over two hundred cases where it was used, says, that the healing of wounds is accomplished with a certainty and uniformity unknown under the strictest Lister dressing. Esmarch and Neuber recommend it strongly, and report 212 extensive wounds treated by the sublimate solution and peat dressing, in which there was no poisoning and only three deaths. In the number there were thirty major operations, thirty-two resections and osteotomies, five herniotomies, fourteen cases of nerve stretching, etc., and in only eleven of the cases was the dressing changed more than once. The writer has used the sublimate dressing in a number of cases of great gravity, and believes strongly in its efficacy. He began with a strength of 1 part to 2,000 of water, but in his present practice in the New York Hospital he uses a stronger solution—1 part to 1,500—1,000 of water. He prefers peat as an absorbent dressing; and it is generally prepared by the addition of one drachm of the mercuric bi-chloride dissolved in two and one-half ounces of sulphuric ether, to one pound of thoroughly dried peat. The peat may be fastened up in bags of various sizes, from four to fifteen inches square, and dipped in the 1 to 1,500 solution before application. None of the advocates of the sublimate dressing have seen any toxic effects resulting from the employment of the mercurial.

Abortion at Two Months and Quadruplets at Full Term.—Drs. Edwards and McTaggart, of London, Ont., in *The Canada Medical Record*, September, 1883, state that they were called in July, 1883, to see Mrs. S., a patient of small stature and light weight, the mother of four living children, who had passed through previous confinements without difficulty, and had never had a miscarriage before. They found her in good health, seven months pregnant, and she told them that about the middle of February, after considerable pain, something was expelled from the uterus which she described as a lump of flesh with blood vessels in it, having something attached that resembled a short string.

She was treated at that time for a miscarriage, and the flowing that followed the abortion finally ceased. She now desired treatment for an extremely enlarged and pendulous abdomen. The medical gentlemen mentioned advised relief through support from the shoulders, and the patient went on to full term. On the evening of September 14th, she was

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delivered of four living children—two boys and two girls, the time elapsing from the birth of the first child to that of the last, being one hour and forty-five minutes. The combined weight of the children was a trifle over seventeen pounds. Labor was normal, no hæmorrhage of consequence occurring. There was but one placenta, the four cords being inserted at different parts of its surface. When the article was written the quartette were six days old, all healthy, able to nurse, and had every chance of life in their favor. The mother did exceedingly well, and seemed to suffer no more exhaustion than if she had had but one child.

Stigmata of Maize as a Demulcent, Anæsthetic Diuretic.—E. Stover, B.Sc., M. D., Rawlins, W. T., says in the *Medical News*, October 6, 1883:—For the last three or four years, stigmata of maize has been used, especially by French physicians and surgeons, in irritated and catarrhal conditions of the bladder and kidneys, with most gratifying results.

Prof. Castan, at Montpelier, first called attention to the remedy and spoke highly of its beneficial effects in gravel and nephritic colic; in the latter disease its administration produced a marked amelioration of the painful symptoms, from which he inferred that the stigmata acted less as a diuretic than as a local anæsthetic. Prof. Denucé, of Bordeaux, obtained most favorable results in vesical catarrh, the remedy appearing to possess an elective action on the mucous membrane of the bladder. These statements are corroborated by a number of other eminent practitioners, of whom, Dr. Landrieux, from a considerable number of observations, has arrived at the following conclusions:

1. The various preparations of the stigmata of maize are of use in modifying the secretions of the urinary tracts. They may also be considered to possess a distinctly diuretic action. 2. Diuresis is rapidly produced, and the increase of urine is very marked after three or four days. 3. The diuretic effects are observed not only in diseases of the organs concerned in the urinary secretion, but also in the affections of the vascular system (diseases of the heart, blood-vessels, etc.). 4. The pulse is regular, the arterial tension is increased, while the venous pressure is diminished. 5. The remedy produces no disturbance of the nervous or digestive system. The tolerance of the drug is complete and absolute, while in chronic cases its administration may be continued for three to six months without inconvenience.

In *L' Union Médicale*, April 6, 1880, Dr. Dassum summa-

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rizes a number of reported cases of chronic cystitis, dysuria, and retention of urine of many years' duration, requiring catheterization, in which, after all of the ordinary means, including washing out the bladder, had been tried and failed, stigmata of maize was used, and produced prompt and permanent relief.

In corroboration of the above-mentioned results, and in view of the fact that the merits of corn silk are not widely known, or, if known, are not fully appreciated by the profession, I submit brief reports of the following cases, taken from quite a large number treated during the last two years.

Case I.—February 9, 1883, was called to see Mrs. M.; married last autumn, and menstruated the last time on November 15, when she had some irritation of the bladder, with frequent micturition. This subsided in a short time, however, without treatment. About two weeks ago, she began to have pain in the lumbar region, pelvis, bowels and bladder; micturition very frequent and painful, so much so, indeed, that her rest was broken at night, and she became very nervous and depressed. Pain is more severe when up and around than when remaining quiet. Gave fluid extract of stigmata of maize, one teaspoonful three times daily. Relief was experienced after the first dose, and in a couple of days the trouble had disappeared, and has not returned.

Case II.—April 13, 1883, was asked to prescribe for Mrs. B.; pregnant about seven months; first child. For some time she has been troubled with very frequent and painful micturition and pain in the bladder, which caused her a great deal of suffering. Gave fluid extract of stigmata of maize, teaspoonful three times daily, which soon relieved the frequeney of, and pain attending micturition, and enabled her to sleep well at night, which previously she was unable to do. The remedy had to be continued regularly until her delivery (June 6, 1883), however, as the painful symptoms invariably returned if a few doses were omitted. It never had any unpleasant effect, and promptly relieved the painful symptoms. After the birth of the child, the symptoms subsided without any medication.

Case III.—June 30, 1883, Mrs. L., strong, healthy woman; married last January, menstruation has always been quite irregular; has not menstruated for seven weeks; never had any bladder trouble before the present attack. About ten days ago noticed some pain in the bladder, with frequent micturition, but only small quantities of urine were voided, and this on three or four occasions contained blood. The

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symptoms increased in intensity and the frequent attempts to empty the bladder were attended and followed by a severe burning pain, which rendered her very miserable. Gave fluid extract of stigmata of maize, forty-five minims, every two to four hours. On July 2d, she called and stated that the bladder trouble had almost entirely disappeared, and she was feeling first rate.

Case IV.—June 14, 1883, P. N., æt. twenty-five years, painter, consulted me with regard to bladder trouble, and gave the following history: Yesterday, was engaged all day in painting the inside of an engine-boiler, and, as a consequence, was exposed to the fumes of lead and turpentine without adequate ventilation. In the evening felt badly, but retired as usual, and, being exhausted, slept very soundly until about two o'clock (A. M.), when he was awakened by a severe pain in the bladder, and an imperative desire to urinate; the act, however, was followed by a very small quantity of bloody urine. After this, micturition occurred every few minutes, was very painful, and only a few drops of bloody urine voided at each act. Saw him at seven o'clock A. M., and found him very restless, nervous and suffering severely. Temperature somewhat elevated, and pulse slightly accelerated. Gave fluid extract of stigmata of maize, teaspoonful every two or three hours. On the evening of July 1st he reported that he had suffered all day yesterday, but in the evening the pain subsided, and he got a good night's rest; after this the recovery was rapid and uninterrupted.

The Use and Abuse of Ergot.—In the *Medical Communications of the Massachusetts Medical Society*, No. II, 1883, Dr. Geo. L. Woods, of Springfield, Mass., gives an interesting and practical discussion of the subject. After dealing with the natural history and general characteristics of the drug, he goes on to say that because our text-books have always taught that with certain precautions ergot is innocuous in tardy labor, we are not obliged to accept the statement as a fact, if it can be shown at present or in future, that its use has not been sufficiently restricted. That such has been and even now is the case is the firm conviction of the writer.

The use of ergot in the first stage of labor is not to be mentioned in this presence.

In view of the instruction which the average graduate has received, and the fact that he enters upon the practice of obstetrics without having seen a case of labor, but with an

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indefinite idea that ergot is a harmless time and labor saving drug, its employment in the second stage of labor becomes a radically different matter. Abundant authority for this use, however, is attested. The indications usually may be tersely stated as follows:—In lingering labor from uterine inertia, it is regarded as essential that the presentation be vertex, the cervix well dilated, the perineum and ostium vaginæ relaxed, and that there be no fœtal or pelvic deformity or other obstruction to the speedy delivery of the child. The contra-indications, as given, naturally suggest themselves, but it is the main object of this paper to express the belief of the writer, who never gives ergot at this stage of labor, but uses the forceps instead, that our authorities have been too liberal in their indications; that the contra-indications and dangers have not been fully appreciated or enumerated with sufficient fullness and clearness; that the routine administration of ergot, into which some of us fall, has been productive of great harm; and, finally, to urge its greatly restricted use.

As employed by intelligent physicians to day, rupture of the uterus is doubtless a remote danger to the mother, but if we only had access to Clay's Handbook of Obstetric Surgery, and gave ergot when the os uteri became dilated to about the size of half a crown, as therein directed, the prospect of a lacerated cervix would be exceptionally good. The approximately uninterrupted pressure of the head upon an incompletely dilated os is well calculated to bring about this untoward result.

Rupture of the perineum is an accident, irrespective of the use of ergot, which is occasionally unavoidable. The wonderful power of the uterine contractions under the influence of ergot, is best appreciated by those whose hands have been subjected to the pressure. In proportion as ergot is used does the distention of the perineum become unmanageable and the liability to its serious injury increase. Too little attention is paid to the fact that, in lingering labor, the maternal passages are hot and dry, and unprepared for the rapid and forcible expulsion of the child. More or fewer abrasions of the mucous lining cannot fail to occur, over which the lochia must flow and through which septic matter may be absorbed into the circulation of the mother and prejudice her chances of recovery, while lacerations of the cervix generally escape detection until long afterwards when their ultimate effects have impelled her to consult her physician.

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The writer feels that he cannot too strongly urge the importance of withholding ergot during the entire period of dilatation and subsequent expulsion of the child. Exceptions will be taken to this total prohibition by men of experience who claim immunity from accident. Granting that these claims are sometimes well founded, the facts yet remain that ergot is daily given before the cervix is fully dilated; that rigidity and laceration often follow the sudden and continuous impingement of the head upon it; that the drug is often, and repeatedly, given to save time or through deference to the wishes of the patient, and before any disproportion of diameters can ba accurately ascertained. The gauntlet of impaction, the forcible passage of a large head through a small pelvis, pelvic phlegmasiæ, sloughing, septic absorption, etc., must inevitably be run.

In view of all this, and more which might be pointed out did time serve, we are confronted by this question: Do the benefits derived from this use of ergot compensate for the risks incurred? But little notice has been taken of the idiosyncrasy of collapse following the use of a moderate dose of ergot before delivery of the placenta, accompanied by a tonic contraction of the neck of the uterus, which effectually prevents its accomplishment for several hours. Within a few years several similar cases have been reported in the journals; but whether this is an important factor in the production of the deplorable results sometimes following the exhibition of ergot, requires further demonstration.

Considering the action of ergot upon the circulatory system, an enfeebled or diseased heart would appear to be a contra-indication to its use which is universally ignored. Cazeaux emphasizes the dangars to the mother, while Schröeder argues that the persistent contraction of the uterus induced does not materially aid the dilatation of the soft parts, and disputes its efficacy as an expulsive agent. Barnes bears testimony to the unreliability of ergot, and its tendency to add to the already existing depression of the patient. Men of large observation and experience assert that ergot is treacherous if used to prevent impending hemorrhage, and that the exhausted condition of the uterus which succeeds such violent contractions sometimes predisposes to the emergency feared. Meigs does not give ergot for its expulsive effect, but prefers the forceps.

The danger to the child under the use of ergot can no longer be underestimated. Whether a poisonous effect is produced as has been claimed, cannot yet be definitely stated,

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but the tendency to tetanic contraction with prolonged pressure upon the placenta or funis seriously interferes with the oxidation and decarbonization of the fœtal blood, and imperils the life of the child.

The routine oractice of many physicians of giving a drachm of ergot as soon as the head is born, is also open to objection. It sometimes locks up the placenta so tightly that only time, chloroform or nitrite of amyl will release it. Personal observation leads the writer to this conclusion, although practitioners of much larger experience doubt its possibility, asserting that it has never occurred to them. This contingency, however, has long been recognized.

Because of this peculiarity in the action of ergot, it cannot be relied upon in the management of abortions and miscarriages. It is after the uterus has been completely emptied of its contents, and for a varying degree of time after delivery, that ergot, in the opinion of the writer, meets its proper and strongest indication. No physician should attend a case of labor without having ready to hand hot water and a solution of ergotine, with appropriate syringes prepared for instant use, should hemorrhage occur after complete evacuation of the uterus. Post-partum hemorrhage is thus robbed of half its terrors.

One of the most frequent indications for the use of ergot is subinvolution of the uterus. It has long stated to the writer that appropriate prophylatic treatment, provided it could be applied, would greatly reduce the number of these cases. This treatment, which is found to be impracticable without the hearty co-operation of the patient, should begin from the moment the third stage of labor is completed.

The patient should not only be kept longer in bed to facilitate involution, but we shall do well to remember that it is the soft, spongy, subinvoluted uterus for which Bartholow recommends ergot. Believing that the process of involution is materially aided and advanced by the cautious use of ergot, it is the practice of the writer to give it in moderate doses for some days after delivery. Corroborative evidence of the value of this plan of treatment is not yet abundant, but Dr. Garrigues, of New York, may be quoted upon the use of ergot as follows: "Ergot ought never to be given during labor. I use this drug in every labor, but not until after the placenta has been expelled. I give it even for four or five days, because I think that by causing contraction of the muscular coat of the blood-vessels it counteracts absorption of septic matter, and by increasing uterine contraction insures good involution."

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The unreliability of ergot has caused great annoyance. Camphor prevents much deterioration of the powder, but a fresh preparation is more reliable. The addition of one per cent. of acetic acid renders the liquid preparation permanent.

As it is sometimes desirable to give ergotina for several weeks in succession, it becomes not only interesting but an important question as to how long the remedy can be given with safety. Doubtless no fixed rule can be laid down; but as some evidence can be advanced to show that ergotine has a cumulative effect upon the system, prudence would seem to dictate conservatism.

At a meeting of a medical society in Paris, some time since, Dr. Boissarie called attention to the possible dangers attending the prolonged administration of ergotine by the mouth. He detailed the case of a young woman of twenty-five, with albuminuria, who took a daily dose of two centigrams of ergotine for four weeks. About a month after cessation of treatment, gangrene developed in both inferior extremities.

Dujardin-Beaumetz relates a case of enteric fever, in which gangrene supervened after the exhibition of a daily dose of one gramme of ergot for one month. A case of pulmonary gangrene in a child of thirteen years has also been reported. Ergotine, in a daily dose of two centigrams, was given by the mouth for about two months for incontinence of urine. Fatal hemorrhage occurred within a month after cessation of treatment.

Dr. Lusk, of New York, reports a case of fibro-myoma of the uterus treated by ergotine injections into the subcutaneous tissue of the abdomen over the tumor. The bulk of the growth was rapidly reduced, but at the expense of gangrene of the compressed tumor and fatal septicæmia.

The Pneumonia of Pregnant Women differs materially in one great particular from ordinary pneumonia, viz.: it is vastly more fatal. A number of investigations have been made on this subject, although there are really only two papers which in a measure cover the ground and seek to properly explain the reasons of this increased fatality. These papers are by Gusserow and Wernich, and from the latter paper the data here communicated are drawn. The causes for the excessive danger and fatality of pneumonia during pregnancy are manifold and all closely connected.

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1. The diminished atmospheric capacity of the thoracic cavity and the lungs consequent upon the encroachment by the increasing size of the gravid uterus and a consequent greater or lesser sluggishness of the venous pulmonary circulation. [Investigations by Gerhardt, Dohren (who found the lung capacity greater at the twelfth and fourteenth day after confinement than during pregnancy), Küchenmeister, Fabius and Wintrich (who deny the diminution of vital lung-capacity during pregnancy).]

2. Disturbance of the circulatory apparatus.

a. From defective innervation of the heart. According to Jürgensen, deaths from pneumonia result from cardiac insufficiency. During pregnancy this cardiac insufficiency is especially marked, and depends partly on,

b. An enlargement of the heart constantly observed during pregnancy (Meniére, Larcher, Ducrest Duroziez), probably an eccentric hypertrophy or dilatation, not concentric enlargement, in consequence of which the heart is less powerful during pregnancy, and,

c. On an anæmic condition of the blood during gestation, which entails cerebral anæmia and defective inervation of the heart.

All these conditions, the diminished atmospheric lung-capacity, the cardiac insufficiency dependent on ventricular dilatation, general and cerebral anæmia and consequent defective innervation of the heart, together, tend to produce a sluggishness of the venous pulmonary circulation, a venous engorgement. Jürgensen says: "Pregnant women and women in labor, who perish from pulmonary disease generally die with the symptoms of pulmonary œdema."

The treatment of pneumonia during pregnancy does not differ materially from that adopted in ordinary cases. Some authors recommend emptying the uterus. Gusserow has compiled twenty-one cases in which labor was prematurely induced for pulmonary disease, and of these 15, 71.3 per cent. died, surely not a very promising result. Spontaneous miscarriage during the disease is not as fatal as when labor is artificially induced. Venesection is supposed to afford relief. In one case observed by Wernich this was employed, but labor pains set in unexpectedly. The child was rapidly extracted with the forceps, but rapid collapse came on, and mother and child died in a few hours. In a second case the application of wet cups to the thorax was likewise followed by labor pains; the mother, however, recovered.

Our remedies consist chiefly in agents calculated to in-

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crease and sustain the power of the heart; above all, digitalis combined perhaps with quinine and mild narcotics; also local remedies. Distressing dyspnœa and cyanosis may, however, produce a vital indication for venesection, and Wernich proposes to counteract the collapse liable to follow after the blood-letting by performing transfusion, when the strength shows signs of failing.

In Cazeaux's Midwifery are reported fifteen cases of pneumonia during pregnancy, collected by M. Gresolle, and four of which occurred in his own practice. Of these fifteen cases ten had not reached the sixth month, four aborted, and only one of these recovered. The six that did not miscarry died without exception. Of the other five, two were seven months pregnant and three in the ninth month. The first two were delivered prematurely and died. Of the last three, two were delivered of living children and the other died undelivered.—*Dr. W. R. Chittick*, of Detroit, Mich., in Detroit *Lancet*, Oct., 1883.

Further Note on Cascara Sagrada.—The further use in maay cases confirms my opinion, previously expressed (J. Fletcher Horne, F. R. C., E., Editor *British Medical Journal*, March 10, 1883), of the extreme value of this drug in constipation. Messrs. Parke, Davis & Co. kindly forwarded me, a few months ago, a quantity of their newer preparation Cascara Cordial, which I have also used in many cases, with the same uniform success. This elegant preparation forms a capital basis for many prescriptions in various diseases, where constipation is a prominent symptom.

Given in two teaspoonful doses three times daily, I find the same result as with the fluid extract, but in a more palatable form. I may add that I always impress upon the patient the adoption of a rule to solicit an evacuation daily at the same hour, and to do this as regularly as I hope they say their prayers.

With cascara sagrada and this rule, constipation should become as rare as a white elephant.—*Detroit Lancet*, Oct., 1883.

Charlatanism in Colorado.—From an interesting article under the above title in the *Transactions of the Colorado State Medical Society*, 1883, by Dr. Jesse Hawes, of Greely, Col., we take the following result of an examination by the State Board of Medical Examiners. The aspirants for medical diplomas were "physicians" who had been practising in the

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State previous to the passage of the new medical law. All answers were in writing.

Question. "How many cranial nerves are there?" Answer. "Three: optic, brachial, and iliac femoral." Question. "Name the chemical constituents of the human body?" Answer. "In tissue we have nucleus cels; they consist mostly of elasticity, extensibility and porosity; the chemical composition of musels is hard to tel, but is in close conection with the areola tissue, blud vesels and nerves." Question. "What is the difference between version and flexion of the uterus?" Answer. "I practice botannical, and therefore do not know any such diseases." Question. "Name the organs found in the thoracic cavity?" Answer. "Liver, hart, longs, stomack, splen and pancreas." Question. "What is varicocele?" Answer. "A lymphatic tumor of the neck."

It is said that in former times the heavy drinkers of England had the custom of drinking a glass of oil at the beginning of a meal; thus they prevented the rapid absorption of alcohol by the stomach, and so avoided drunkenness.

Book Notices, &c.

A Practical Treatise on the Medical and Surgical Uses of Electricity. By GEO. M. BEARD, A. M., M. D., Fellow of the New York Academy of Medicine; Member of the American Neurological Association, etc., and A. D. ROCKWELL, A. M., M. D., Fellow of the New York Academy of Medicine; Electro-Therapeutist to the Woman's Hospital of the State of New York, etc. Fourth Edition. Revised by A. D. ROCKWELL, M. D. With nearly Two Hundred Illustrations. New York. Wm. Wood & Co. 1883. 8vo. Pp. 758. Cloth. (For sale by West, Johnston & Co., Richmond.)

This is undoubtedly the American standard work on the subject, and it is difficult to see how it could be improved. There is no point in treatment by electricity which, in the present volume, is not carefully presented with the fullest details. Althongh much is to be said in praise of the rewritten chapter on Franklinic Electricity, there is nothing in the new matter introduced so important as that which relates to the experience of Dr. Rockwell in the treatment of Extra-Uterine Pregnancy. Formerly such cases resulted either in immediate death, from rupture of the distended

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Fallopian tube, or, when nature endeavored to rid itself of the fœtal mass, death after protracted suffering, the only other alternative being the surgeon's knife, generally followed by a fatal ending. Now, through the successful operation, first devised and executed by Dr. Rockwell, this abnormality of pregnancy is robbed of its terrors, and need not be regarded the dreaded complication it has been in the past.

This work, although so valuable to the practitioner who makes daily use of the battery, is yet so full in the first essential details of Electro-Physics, that the physician who begins the study of the physical relations of electricity, may find in it all that is known upon the subject, and presented with such lucidity and thoroughness that the dullest mind can comprehend the language.

Electro-therapeutics to-day plays such an important part in disease that no doctor's armamentarium is complete without at least a faradic battery. The value of the method of general faradization as a sedative and tonic, has been so long confirmed that it is hardly necessary to refer to it. But it is essential to learn the peculiar uses of the current, where it is applicable, how applied, etc., and the practitioner who possesses an instrument is considerably more dangerous to the community, until he learns these details, than he ever could be without it. There is probably no manual in the English language where such information can be found, so full and complete, as in this volume. Everything the electro-therapeutist would know, that can be taught, is to be found in its pages. Since the death of his co-laborer, Dr. Beard, Dr. Rockwell stands confessedly pre-eminent as the teacher of the Medical and Surgical uses of Electricity.

A Text-Book of General Pathological Anatomy and Pathogenesis. By ERNEST ZIEGLER, Professor of Pathological Anatomy in the University of Tubingen. Translated and Edited for English Students by DONALD MACALISTER, M. A., M. B., Member of the Royal College of Physicians; Fellow and Medical Lecturer of St. John's College, Cambridge. New York. Wm. Wood & Co. 1883. 8vo. Pp. 371. Cloth. July No. Wood's Library of Standard Medical Authors. (From Publishers.)

The greater portion of the text of this volume is based upon observations made or verified by the author himself, and when he has drawn upon other sources he has been careful to cite the exact authorities. Prof. Ziegler, states that although it may seem to the reader that he has been somewhat dogmatic in his expressions of personal views on some

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few points, yet he believes that by so doing he has presented a more uniform and coherent system of doctrine, by which the learner may more readily and surely grasp his subject, and an examination of the work seems to show that his view of the matter is correct. The present volume does not deal with Special Pathological Anatomy, but is a very complete treatise on General Pathological Anatomy, and the subjects of Malformation, Inflammation and Bacteria are more fully discussed, and practically treated, than in any manual of the kind we have ever seen. The careful editing of Dr. Macalister is perceptible in every chapter. To the student of Pathology the book is invaluable.

Insanity. Its Classification, Diagnosis and Treatment. A Manual for Students and Practitioners of Medicine. By E. C. SPITZKA, M. D., Professor of Medical Jurisprudence and of the Anatomy and Physiology of the Nervous System, at the New York Post Graduate School of Medicine; President of the New York Neurological Society, etc. New York. Bermingham & Co. 1883. 8vo. Pp. 415. Price, $3.00. (From Publishers)

The foundation of this volume is to be found in various papers on different subjects related to Insanity, which have appeared from Dr. Spitzka's pen in the medical journals of the past three years; but the thorough revision of the articles, and the great amount of matter necessarily added, make the book a new one, even to those who have carefully read all that the doctor has written before on this special subject.

His definition of insanity is briefly condensed, thus—the individual is either unable to correctly register and reproduce impressions in sufficient number and intensity to serve as guides to actions in harmony with his surroundings, or the failure to properly co-ordinate such impressions, and to frame thereon logical conclusions and actions; excluding such inabilities and failures as are the results of sleep, trance, coma, intoxication, nervous shock and the common manifestations of the general neuroses.

Many writers on insanity do not attempt to give any definition whatever, and the subject has often been left in a cloudy condition, as may be inferred from the manner in which an English author on Lunacy (Shepard) defines it. He says "insanity is a disease of the neurine batteries of the brain."

Dr. Spitzka in this work has not endeavored to present an exhaustive treatise on insanity, but, as he expresses it, one

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which "shall direct attention to such of the salient points of psychiatry as the general practitioner may be reasonably expected to familiarize himself with—particularly if he desires to fill the position, so often forced upon him, of acting as the first counsellor of a family in cases of insanity;" and we think the reader will acknowledge that the task has been well accomplished.

An Encyclopædic Index of Medicine and Surgery. Edited by EDWARD J. BERMINGHAM, A. M., M. D. New York. Bermingham & Co. 1883. 8vo. Pp. 934. Price: Cloth, $5.00; Sheep, $6.00. (From Publishers.)

In this work the task has been attempted to concentrate the best views on the diagnosis, pathology and treatment of the various medical and surgical ills of the human body, as held by the leading members of the profession, into a single volume; and, after a careful examination of the book, we are compelled to say that the collator and editor has been successful.

It is almost needless for us to remark upon the value of the matter, when we state that among the list of eminent writers who are here represented, there are to be found the names of Alonzo Clark, Fordyce Barker, Sir William Jenner, Holmes, Thomas, Willard Parker, Beard, Post, Aitken, Hutchinson and Hammond. In fact, it is invidious to give a list of the best names whose writings are to be found in the work, as there is hardly one of the thirty-six given but is known to most English speaking practitioners.

This busy, hurrying age requires all thought and information in as condensed a form as possible, and this requirement is fully met in the book in question, while at the same time, no point of importance has been sacrificed to save space. No index is required, as an alphabetical arrangement of the subjects has been adopted, as well as the fullest cross references for synonymous terms. The entire field comprised in the Theory and Practice of Medicine and Surgery seems to be thoroughly covered, and no general practitioner can consult the volume without finding something of practical value for his daily work. The editor announces in his preface that his aim has been to make the book one which should be pre-eminently *useful*, and we think that every candid doctor who examines its contents will be ready to acknowledge that Dr. Bermingham has not failed in his endeavor.

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Compend of Surgery for Students and Physicians. By ORVILLE HORITZ, B. S., M. D. With Fifty Illustrations. Philadelphia: P. Blakiston Son & Co. 1883. Cloth. 12mo. Pp. 133. Price, $1.00. (From Publishers.)

This is No. 9 of the series of "Quiz Compends" being issued by the well-established publishers of Philadelphia. To the student in college, it is very serviceable, as the teachings are based on standard text-books and on the lectures of eminent authorities in the country. To the practitioner the "Compend" is no less serviceable, as it presents him with the essential facts and suggestions in a condensed form. We would suggest the addition of a complete index to each of the series. Price of *interleaved* edition for taking notes, $1.25.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. IV. E—FIZES. Washington: Government Printing Office. 1883. 4to. Pp. 1033. Cloth. (From Surgeon-General's Office.)

Dr. J. S. Billings, Surgeon U. S. Army, of Washington, D. C., is known so well to the profession of the country for his many valuable helps that it would be a work of supererogation to do more than specially mention him as the one worthy of the truest credit for supervising this invaluable work. Such a work could not possibly be undertaken by any business house of the country, because it would not pay. Comparatively few doctors of the United States could afford to purchase the proposed series at cost-of-publication prices, and many fewer still, who have the means, would subscribe to or purchase the completed series because they do not pretend to be investigators. But how many disputes annually arise as to authorship of medical suggestions? How many references are being continuously made to authorities by medical writers that are not accessible? *How many more* references are made that need corroboration? The best and, as we believe, the chief authoritative way to secure accurate information on such an issue is to consult this *Index Catalogue.*

It is most too soon to make any suggestion as to the truly proper conduct of this Index-Catalogue. The Index, thus far published in this last volume, does not finish the Fs. But in order that the authorities in charge, or those who may succeed them, may have a suggestion from the profession that has been so bountifully served by works of love rather than of requirement, we venture the remark that,

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after the completion of the present undertaking, it would be well for something of a Department or Bureau to be organized, in connection with, and under the control of the Surgeon General's Office, for the purpose of continuing, in pamphlet form, the same quarto size as the present issues of the Index-Catalogue. Such pamphlet issues might well be made semi-annually or annually, according to the interests of the Bureau. No publisher, looking to pecuniary interests, can afford such a publication. The work, once begun, must be recognized as next to invaluable to originators and to those seeking research, as to medical discoveries. And what profession or class of people are more truly serviceable to the Nation than educated doctors?

If the officers in charge of the work they have projected are in accord with the views thus crudely expressed, they may depend upon us to advocate the views herein intimated, or else to modify our opinions, upon suggestion, to such as we may hereafter think to be the interests of the American Medical Profession.

Principles and Practice of Surgery, being a Treatise on Surgical Diseases and Injuries. By D. HAYES AGNEW, M. D., LL. D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Profusely Illustrated. Vol. III. Philadelphia: J. B. Lippincott & Co. 1883. Royal 8vo. Pp. 784. Cloth. Price $7.50. (For sale by Messrs. West, Johnston & Co., Richmond.)

This elegantly issued volume completes the eminently practical Treatise on Surgery which has so long been the special purpose of the illustrious author to present the profession. The words of commendation everywhere spoken in regard to Volumes I and II must be repeated with reference to this—the concluding volume. There can be no stint of praise given the completed work which, for decades to come, must rank high among the standard surgical treatises.

This volume is taken up almost entirely with surgical *diseases* of special parts or organs. The first chapter (or, as it is printed, Chapter XXIV, so as to accord with the general arrangement adopted in the former volumes) considers diseases of the larynx and trachea, and the various operations or procedures intended for their relief. The author believes that croup and diphtheria are distinctive diseases, and lays down diagnostic tables which must convince even the skeptical as to the correctness of his views. The next chapter considers the diseases of the naso-pharyngeal region and associated parts. Diseases and injuries of the eye and its

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appendages are the subjects quite fully treated of in the following chapter. Diseases and injuries of the ear are then discussed with the same eye to the practical that characterizes other divisions of the book. The chapter on malpositions and deformities is excellent, and special attention is devoted to descriptions of the various tenotomies that may be required, as also of the various appliances that may be needed. Affections of the muscles, tendons, bursæ and aponeuroses are quite exhaustively treated of—both as to diagnosis and treatment. Surgical affections of the nerves are excellently described, and the methods of treatment accord with the most advanced teachings of the day. Surgical affections of the lymphatic system, skin and subcutaneous connective tissue occupy some 50 pages. As regards the author's doctrines of syphilis, he holds to many of the old views. He says: "The possibility of converting a chancre into a chancroid, I have no reason to doubt." His reasons for being a modified unicist we believe to be rather theoretical than based upon proper considerations. In short, we are "dualists" in our convictions, which the arguments of Dr. Agnew do not alter. We regret not having space to state the reasons of our faith—based on observation and study. The subject of tumors is well considered—both descriptively and therapeutically. Diseases of the mammary gland is the title of a well prepared chapter, and is recommended to every practitioner. The three concluding chapters relate to the surgical application of therapeutics, operations for nerve stretching and massage.

Practical Manual of the Diseases of Children, with a Formulary. By EDWARD ELLIS, M. D., Late Senior Physician to the Victoria Hospital for Sick Children, etc. Fourth Edition, Revised and Enlarged. New York: Bermingham & Co. 1882. 8vo. Pp. 218. Cloth. Price $1. (From Publishers.)

There is no attempt on the part of this well-known author to press personal views, nor to enter into theoretical discussions over unsettled points in pathology or therapeutics. His effort has been chiefly to present those views which have, for the most part, the sanction of experience and the weight of authority. Hence this is a most important work for the medical student and young practitioner. For those dependent upon formulæ for their prescriptions, we would add that 256 of these are appended, and it only needs a good memory to master them. No unkind criticism can be passed on any

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of those we have examined. Indeed, some of them are well established. A few practical hints and directions are added as to articles of diet and the proper mode of preparing them for the sick child. The book is a first-rate guide for physicians.

Types of Insanity. An Illustrated Guide in the Physical Diagnosis of Mental Diseases. By ALLAN McLANE HAMILTON, M. D., One of the Consulting Physicians to the Insane Asylums of New York City, and the Hudson-River State Hospital for the Insane, etc. New York: Wm. Wood & Co. 1883. Quarto. Pp. 36. (For sale by Messrs. West, Johnston & Co., Richmond.)

The time has come when, even with the most dramatic powers of word painting, it is impossible for a writer to so accurately describe facial expression, etc., that they can be made known to the reader. Precise drawings are essential to aid the text, in order that the shades of difference may become familiar to the student who has not truly clinical advantages. Chromo-lithographs are needed now in dermatological works; wood cuts are required for the illustration of surgical instruments and operations; exact lines must be reproduced in type to properly represent microscopical specimens. But nowhere is it more essential that accurate photographs should be reproduced for the full appreciation of a subject than in the study of expression in insanity. Dr. Hamilton has attempted to popularize this system in the present volume, and the Publishers deserve the unbounded thanks of the profession for their liberality in undertaking the publication of such a work. Here we have a perfect picture of an idiot, with a clinical text note. Plate II represents an imbecile. Plate III is illustrative of melancholia attonitta. Plate IV shows the expression of chronic melancholia. Plate V photographs subacute mania. Plate VI shows acute mania. Plates VII and VIII illustrate dementia. Plate IX is abusolutely graphic of general paresis. Plate X represents the different pathological states of otheotoma, idiotic and syphilitic teeth.

The paper-covered text, the unbound sheets containing the clinical notes of the several exactly delineated plates, above alluded to—also unbound—are all enclosed in one of the best arranged portfolios we have ever seen devised for such a purpose.

How any alienist can do without this work—now that it is published—we cannot conceive; medical officers of every insane usylum or retreat ought to have it beyond all ques-

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tion. Practitioners, in general, ought to find a special interest in it, since upon their diagnosis so many families are dependent for their reputation as to the misfortune of having any member insane, and proper subjects for commitment to an asylum, under the physician's advice. Medical jurists should also make themselves familiar with the illustrations given in this volume. We trust the enterprise begun by Dr. Hamilton and Messrs. Wood & Co. will receive such patronage as to induce them to pursue their efforts.

Pocket Book of Physical Diagnosis of the Diseases of the Heart and Lungs for the Student and Physician. By DR. EDWARD T. BRUEN, Demonstrator of Clinical Medicine in the University of Pennsylvania, and Assistant Physician to University Hospital, etc. Second Edition, with additional Illustrations. Phiradelphia: P. Blakiston, Son & Co. 1883. 12mo. Pp. 228. Price, $1.50. (From Publishers.)

This book has the value of certain illustrations which we have not seen in any other publication—although the author himself does not claim them as original. Without illustrations in such a work, the book is almost useless to the medical student. We have not been fortunate enough, in order to draw comparison, to see the first edition of this so-called "Pocket-Book." But notwithstanding the misnomer of calling a 12mo a "*pocket*-book," we ought to say that the present edition is a valuable publication to all practitioners. The author himself does not seem to attempt competition with some other books of more pretentious title; but it is simply honest justice to say for this book that, *so far as it goes*, it is equal to the best in description, and it contains many suggestions which, if more tersely stated, would make it the *popular* work on the subject of which it treats. Simply as the title, that it is a "*pocket-book*," we criticize the work before us; as to its merits and value to physicians, in general practice, we commend it.

Case for a Board of Medical Examiners.—During a class quiz at a New York medical college some time ago, the Professor of Anatomy, holding in his hand a well-preserved skull, addressed a negligent student as follows: "What is this for, sir?" at the same time pointing to the *foramen magnum*. After some hesitation the student replied: "That, sir, is the hole that the œsophagus passes through." The disgusted Professor dropped the skull with the remark: "Well, sir, I imagine that it must be so in your case, as you appear to have swallowed your brains."

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Editorial.

Foreign Honors to American Pharmacists.—We learn from foreign journals that our enterprising countrymen, Messrs. Parke, Davis & Co., of Detroit, Michigan, have been the recipients of very distinguished honors abroad. They exhibited at the late International Pharmaceutical Exhibition, at Vienna, a line of the products of their laboratory, including preparations of the newer remedies with which their name has become so intimately associated, gelatine products, pills, etc. Their display was evidently a revelation to the Europeans who have affected to despise American pharmacy. Within the past year the medical profession of Germany have manifested a very decided interest in many of the newer drugs of P. D. & Co.'s introduction, but they were scarcely prepared for the display of artistic elegance and pharmaceutical excellence which characterizes the products of this house. Popular interest was very largely centered in their department of the exhibition, and the Emperor and Archduke Karl Ludwig took especial pains to compliment Mr. Wetzel, the representative of the house, on the beauty of the display, which also won from the jury of award of the Exhibition a gold medal. We congratulate Messrs. Parke, Davis & Co. on this evidence of their tendency towards universal empire in the matter of pharmaceutical preparations.

An Apology.—We have to regret that we have given even the endorsement of our advertising columns to Dr. H. H. Kane and his preparation. After having examined a copy of his pamphlet "The Living Death," we promptly withdrew his advertisement from the *Monthly*. It is pitiful to see a man who has stood so high in the profession, and whose writings have made him a name among men, stoop to such degrading methods of quackery and open charlatanism. We apologize to our subscribers for the appearance of the advertisement in the past.

The Opening of the New Building of the Medical School of Harvard University, on October 17th, 1883—that being the centennial anniversary of the Medical School of Harvard University—was the occasion on which Dr. Oliver Wendell Holmes, late Professor of Anatomy in that institution, delivered an address of characteristic interest and historic value on "The New Century." It is published in full in the Phil-

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adelphia *Medical News*, October 20th, as also in the *Boston Medical and Surgical Journal*, October 18th. So far as the Doctor's incidental remarks relate to the propriety of erecting the costly new building, just finished, are concerned with public interest, we think they should be thoughtfully considered by all who contemplate the erection of colleges, churches and halls, where lectures, sermons, etc., are to be delivered.

Instruments, Books, etc.—Any one wishing to purchase either books or instruments would do well to correspond with Mrs. Carrie D. Fontaine, New Canton, Buckingham Co., Va. This lady is the widow of the lamented Dr. A. W. Fontaine, of that place, who died recently, and she desires to dispose of his entire library, etc. Full particulars concerning condition and value may be obtained by application as above.

College for Medical Practitioners, St. Louis, Mo.—This excellent school begins its winter's work this month, the fourth session beginning Nov. 5th, 1883, the fifth session on Jan. 7th, 1884, and the sixth session on March 3rd, 1884. Each term is a few days longer than a month, and this division of time allows the physician attending-to return to his practice between the sessions, if desirable. The instructors rank at the head of the profession in the West, and the course is given for practitioners only.

The Physician Himself.—We return to the author, Dr. Cathell, our thanks for a copy of the third edition of this valuable little work. We have favorably noticed the first two editions in our columns, and have said everything in praise of it. It is indeed a book that should be read and studied by every physician, especially those beginning their professional career. It can be procured by mail from the publishers, Cuslungs and Bailey, of Baltimore, Md., by sending them $1.25.

Errata.—In the article on Predisposition and the Bacillus Tuberculosis Essential Factors in the Production of Consumption of the Lungs and Air-Passages, by Dr. Harvey L. Byrd, of Baltimore, in the October issue of the *Monthly*, the following corrections are required to give a full understanding of the text: On page 474, fourth line from the top, read "excluding those which result from tranmatisms"

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instead of "especially those which result from tranmatisms." On same page, seventh line from the end of the article, read "confidently expect its fulfillment" instead of "confidently expect, with its fulfillment." Also omit "and" from the line next following. We are always sorry to be obliged to make corrections of the kind, but errors of like character will occasionally occur, despite the most careful proof reading.

Dr. Wm. S. Janney has been unanimously elected Professor of Practical Anatomy and Clinical Surgery in the Medico-Chirurgical College of Philadelphia. Dr. Janney is the present coroner of the city of Philadelphia, and is well-known to the profession as an Anatomist and Surgeon of extended experience.

The American Newspaper Annual for 1883, compiled and published by N. W. Ayer & Son, of Philadelphia, has been examined by us, and we find that its pages contain the fullest information concerning the existence and circulation of the papers and journals of the country. It is exceedingly valuable as a book of reference.

Dr. L. Duncan Bulkley will deliver his seventh course of lectures on Diseases of the Skin, at the New York Hospital, on Wednesday afternoon at 2.30 o'clock, commencing Wednesday, October 17th, 1883.

These lectures are free to physicians and medical students, and are illustrated by plates, photographs, models, clinical material, etc. The entire subject of Skin Diseases (including syphilis), will be covered during the course, and the reputation of the eminent teacher is sure to draw a large class. Any visitor from the South will be gladly welcomed.

Baltimore Medical College.—We have just been informed that the Trustees of the Baltimore Medical College, located on Paca Street, in that city, have purchased a large building contiguous to their College for a Hospital. The lot is seventy-eight feet front by 165 feet deep. The Hospital has been opened for patients, for the benefit of students of that College.

Lindsay & Blakiston's Physician's Visiting List for 1884 is issued. It is the thirty-third year of its publication, and the present issue contains some important new features. The Posological Tables have been revised in accordance with the

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new Pharmacopœia, and there has been added a carefully prepared list of new remedies, Sylvester's method for producing artificial respiration, illustrated, and a diagram of the chest as an aid in diagnosis. The covers have been strengthened, and a very excellent lead pencil accompanies each book. Sizes and prices:—All with tucks, pocket and pencil—for 25 patients, weekly, $1; for 50 patients, weekly, $1.25; for 75 patients, weekly, $1.50; for 100 patients, weekly, $2; 50 patients, weekly, two volumes, semi-annual, $2.50; for 100 patients, weekly, semi-annual, $3. The *interleaved* editions cost:—for 25 patients, weekly, $1.25; for 50 patients, $1.50; for fifty patients, semi-annual, $3. Perpetual edition (without dates), size of the 25 patients (interleaved), $1.25. This List, which is so favorably known to most practitioners, is for sale by Messrs. West, Johnston & Co., of this city. Orders should be sent in early so as to enable these worthy booksellers to supply the demand.

St. Louis Medical and Surgical Journal.—This long established and well conducted Journal has for its editor and proprietor, Dr. Thomas F. Rumbold. Mr. Frank M. Rumbold, as business editor, has rendered efficient service in making the *Journal* what it is. To his help, Dr. Rumbold has brought in association with him Drs. H. Christopher, of St. Joseph, Mo.; A. E. Prince, of Jacksonville, Ill.; William C. Byrd, of Quincy, Ill.; and LeGrand Atwood, of St. Louis. Dr. John B. Keber, of St. Louis, is assistant editor. No one that has known the *St. Louis Journal* can underrate its meritorious value. Dr. Prince is a gentleman who has made himself famous because of the number and the importance of his contributions to many medical journals of the United States. Dr. Byrd is a gentleman of no less excellence or eminence. The many papers published in this and other medical journals attest his worth, by which he may be judged in his present capacity. Dr. Rumbold is to be congratulated in securing such an able assistant. Had we space we would speak in like congratulatory terms as to the other able members of the editorial staff.

Medical Legislation.—As the Legislature of Virginia is so soon to assemble, it would be well for doctors generally throughout the State to instruct their representatives as to the legislative enactments needed for the protection both of the people and profession.

A State Board of Health was appointed in 1871 by the

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Governor, in compliance with an Act of the General Assembly in 1871; but the very act creating the said Board provided that the said Board shall not be an expense to the State. It would be an economy to the State to appropriate annually a sum of about $5,000 to support such a Board. Without some such an appropriation, the Board cannot be expected to render any efficient help. The powers granted the Board by the act of origination are ample enough, with the single exception that it has no money at its control, by means of which to secure the execution of its orders. Dr. James L. Cabell, of the University of Virginia, is the President of the Board; the late Dr. Levin S. Joynes, of Richmond, Va., was the Secretary. We urge the doctors throughout the Commonwealth to call the special attention of their newly elected legislators to the Board and its wants, so as to make it effective.

For years past the profession has petitioned the Legislature to establish a Board of Medical Examiners. The need for such a Board are too plain to every observer in the profession to require any argument. But the legislators are ignorant of the nature of such a proposed Board, and of its proposed duties. Let the doctors instruct their respective legislators before they come to Richmond as to the object of such a Board, and show them how the Board of Medical Examiners would benefit the people and elevate the educational standing of the profession of Virginia. Give the lessons to the legislators before they leave their homes; for there is usually but little opportunity to secure their consideration of such a subject after their arrival. Political caucussing and personal bills then take up the time of the members of the General Assembly.

A "pharmacy bill" will be presented by a Committee of the Virginia Pharmaceutical Association. This bill should receive the hearty support of every practitioner.

Other measures of great practical interest to the profession will probably arise. We trust the doctors will pay due attention to these matters, and lend willing and earnest help to the zealous workers for the promotion of physicians' interests.

Rex Magnus.—Agents wanted in every town in the United States to sell Rex Magnus, an article indispensable in every family. Live grocery men and druggists preferred, as they need it in their own business. Grocers will not only make a good profit in supplying the large demand, but can save a

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great deal of money by using it to keep meats, milk, etc., which would otherwise spoil. Address The Humiston Food Preserving Co., 72 Kilby St., Boston, Mass. See advt.

Dr. J. Marion Sims will sail from New York on the "Germania" on November 17th, and will spend the Winter in Rome. He expects to return to New York next Fall. It is the earnest wish of his world of friends that he may have a pleasant trip and a safe return to his home, and then let the profession have his long promised and eagerly sought work on geynæcology.

International Medical Congress.—The eighth International Medical Congress is to be held in Copenhagen, August 10–16, 1884. The General Organizing Committee, formed for preparatory work, is composed of the following members, living in or near Copenhagen: *President*, Prof. Dr. P. L. Panum, *Secretary-General*, Prof. C. Lange; *Secretaries*, Drs. O. Bloch, C. J. Salmonsen, and Surgeon-General Joh. Moller; *Honorary Treasurer*, Prof. Dr. E. Hansen Grut, together with the presidents of the special committees of sections, numbering fifteen. The other members of these special committees have been selected in part from other Scandinavian countries than Denmark. Communications have been sent to physicians prominent in different departments in different countries, in order to prepare a programme. This programme we shall present to our readers in due time, or the programme and rules will be forwarded, when prepared, to every one qualified to participate in the Congress who shall announce to the Secretary his interest in the Congress aud his intention to participate in it.—*St. Louis Courier Med.*, Nov., 1883.

Sir John Rose MacCormack, F. R. C. S., has been passing the last few weeks in this country, and has been the recipient of considerable attention, notably so from the leading practitioners of New York and Philadelphia.

Triplett Extra Uterine Fœtation.—An authentic report is going the rounds of this city, to the effect that recently a case of this kind occurred in this city. The diagnosis was doubtful, but a post-mortem proved the existence of three fœtuses outside of the womb, in the abdominal cavity. The ages of each seemed to be about two months, three months, and four months respectively. The uterus itself is said to

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have been empty. The lady had previously borne a healthy child which is still living. But as we hope for a full report soon from the gentlemen who had special charge of the case, we will not attempt a further note.

The American Rhinological Association was organized in St. Louis, Mo., October 2nd, 1883, with a membership of twenty doctors, representing six States. Dr. Thomas F. Rumbold, of St. Louis, was elected President for the first year, and Dr. H. Marks, of St. Louis, Secretary and Treasurer. A goodly number of valuable papers were presented and read. The next annual session will be held in St. Louis upon the call of the President.

Correction.—In the report given in the October number (page 503) of the discussion on treatment of diphtheria, Dr. Wm. Selden is made to say, "He had never seen a patient die who was under this treatment." The Doctor writes us, calling our attention to the error, and adds that he "never said anything so absurd. I think I said that I thought our Norfolk treatment of diphtheria has been attended by much more than average success." So absolutely correct and valuable do we regard every statement of Dr. Selden as to medical experience or observation, that we regard it important to make haste to correct an error of reporting.

Pittsburg Medical Journal.—In the November number of this excellent journal we notice an editorial paragraph in which is announced the intention of the editors to suspend its publication after the issue of the December number, which completes the third volume. The suspension is mainly due to the contemplated absence of the senior editor, Dr. Thos. J. Gallaher, who goes to Europe in the spring to recuperate his health. We are glad to learn, however, on the best authority, that the suspension of the journal will probably be only temporary, and that upon Dr. Gallaher's return next fall it will be reissued, enlarged and improved.

An Immense Stone.—The *New England Medical Gazette* of November, 1883, says: A calculus was removed from the bladder of a boy sixteen years old by Dr. Joseph W. Howe (*New York Medical Journal*) which weighed one thousand five hundred and forty-one grains, and measured three inches by two and a quarter inches. An attempt was made to extract it through the perinæum, but it was found to be too

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large, and efforts made to crush it were unsuccessful, Civialea, lithotrite and Bigelow's instrument each being tried. An incision was then made in the median line above the pubes, and after some difficulty, owing to contraction of the bladder, it was withdrawn. After the operation symptoms of collapse came on, but he soon rallied and made a good recovery.—*Chicago Weekly Medical Review.*

Subscribers in Arrears will please pay up promptly, as we want to balance our books before a new year sets in.

Archives of Laryngology.—This journal, so valuable to practitioners who confine themselves to treating diseases of the throat region, will be discontinued after the publication of the next number, but no reasons are given for this unexpected action.

Learn how to Question.—Professor, to a class in surgery: "The right leg of the patient, as you see, is shorter than the left, in consequence of which he limps. Now, what would you do in a case of this kind?" Bright student: "Limp, too."

Infringement of Trade-Mark.—By a decree of the Supreme Court of Rhode Island, issued in July, 1881, the manufacturers of "Hughes' Acid Phosphate" were enjoined from offering for sale "Acid Phosphate" so-called, which was an imitation of Horsford's Acid Phosphate. Quite recently they have been fined $600 for violation of the above injunction, and the Rumford Chemical Company warn all persons from selling any imitation of their preparation, as they will by so doing render themselves liable to an action for damages.—*Canada Lancet*, Nov., 1883.

Harvey's Remains.—The remains of Dr. Harvey, discoverer of the circulation of the blood, have been recently removed from the vault at Hempstead in which they have lain many years, and placed in a sarcophagus in the chapel. The object is to insure protection against desecration.—*Canada Lancet*, Nov. 1883.

Quince-Seed Cosmetics.—Dr. C. H. Von Klein has made the observation that the cutaneous irritation so frequently found upon the foreheads of fashionable ladies is the result of the quince-seed mucilage used for the purpose of arrang-

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ing the "bangs" and other nonsensical flub-dubberies.—*N. Y. Med. Times.*—*Sanitarian*, Oct. 18, 1883.

Medical Education.—The following, from the pen of an "old-school" physician, written for a secular journal of wide circulation, is quite extraordinary: "It seems incredible that our so-called best medical schools should still adhere to the methods of instruction which grew up out of the exigencies of the American Revolution. Everywhere else education is graded, systematic, and scientific; but the study of medicine, even in our largest and most popular schools, is a happy-go-lucky affair, most disheartening to one who wishes to obtain the best results of study. Over and over again the American Medical College Association has met and *resolved* against these abuses, but up to the present time there have been found but four medical schools with enough backbone to actually adopt the reforms which all admit to be most desirable. The 'forlorn hope' of advanced medical education in this country to-day is the medical departments of Harvard, Syracuse, Boston, and the Northwestern Universities."

Obituary Record.

Dr. J. Marion Sims.—Just as we were putting the last form of this issue on the press, we were shocked by the telegraphic announcement of the death of Dr. J. Marion Sims. He died suddenly at his home in New York City, on the morning of November 13th, 1883. After attending a patient late in the evening of November 12th, he retired apparently in his usual health. Early during the morning of the 13th he conversed with his wife, and shortly afterwards she observed that something was wrong and immediately summoned her son, Dr. Harry Sims, who upon examination found his father was dead. Heart disease was the presumed cause. For some years, Dr. Marion Sims has been in bad health, and every winter he was in the habit of seeking a more equable climate than that of New York City. As elsewhere stated in this number, he was to have sailed for Europe on the 17th inst. Next Fall he expected to return to this country, when he proposed to remove to Washington City, where he had recently purchased a lot on which he was to have built.

Neither space nor our feelings will allow us at this time to extend this notice. But we promise our readers a full

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biographical sketch of the "Father of Gynæcology," who was also *the* great benefactor of his age. The peculiar attachments formed by the Editor of the *Medical Monthly* for the deceased makes him mourn the loss as a son.

Dr. Benjamin Dennis, of Amelia County, Va., died November 8th, 1883, of apoplexy, on the Old Dominion Steamer, "Wyanoke, while en route from New York to Richmond. His remains were brought to this city and were interred in Hollywood Cemetery. The Doctor was about 60 years of age. He possessed many qualities of head and heart that endeared him to a large circle of friends. He was, until his health began to fail, a physician of ability, and had an extensive practice. Years ago he represented his district in the Virginia Senate, and while there he exhibited great interest in all proposed legislation intended for the good of the profession.

Prof. J. A. H. Depaul, Professeur Agrégé in the Faculty of Medicine of Paris, has recently died of pneumonia, after an illness of three days. Prof. Depaul was born in Pau, in 1811. At the age of seventeen he went to Paris, and after many hardships completed his medical course. He received the degree of Doctor in Medicine in 1840, was created Professeur Agrégé in 1847, Surgeon to the Hospitals in 1853, having been elected to the Académie and the Société de Chirurgie in the previous year. He devoted himself more especially to obstetrics and gynecology; his work in this department of medicine, and his position as a teacher, need only to be mentioned. In 1862 he was called to the chair of Clinical Midwifery, which he filled until his death.

Among his better known works may be mentioned his *Traité theorique et Pratique de l' Auscultation Obstetricale* and his *Traité de Clinique Obstetricale;* the latter, unfortunately, remains unfinished. He founded and was the editor of the first obstetrical journal in France, the *Archives de Tocologie*, and was one of the collaborators of the *Dictionnaire des Sciences Encyclopediques*. Notwithstanding his age, his professional and scientific work was kept up almost to the day of his death.

He was elected President of the Académie of Médicine in 1873, and upon the announcement of his death, at its meeting of October 23d, that body immediately adjourned, as a mark of respect to the memory of its distinguished member. —*Med. News*, Nov. 10, 1883.

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VIRGINIA
MEDICAL MONTHLY.

VOLUME X—No. 9. WHOLE NUMBER, 117.

RICHMOND, DECEMBER, 1883.

Original Translations.

From the French and German. By WM. C. DABNEY, M. D., Charlottesville, Va.

The Entrance of Air into the Uterine Veins as a Cause of Sudden Death in Women, after Confinement.—In the *Gazette Médicale de Nantes*, of September 9th, 1883, is a very able and exhaustive review of this subject, by Dr. Alfred Rouxeau. The paper is a difficult one to condense into smaller compass, but is so valuable and instructive that it will well repay perusal.

The author first mentions the historical fact that the first reported death from the entrance of air into a vein occurred in the hands of Beauchene in 1818 during the extirpation of a large tumor from the right shoulder. Amussat in 1839 first called attention to the *possibility* of air entering the uterine veins after delivery, and a number of accoucheurs have since that time suggested this accident as a possible explanation of sudden death occurring in some cases of confinement. Among the older writers he mentions Baudelocque, Madame Lachapelle, d'Olivier, McClintock and others, while in recent times papers on this subject have been written by Olshausen, Kezmonky, Esleben, Liormet, Moy, Cordevent, Draper and Davidson.

He mentions, in the second place, the fact that the possibility of death under these circumstances and from this cause has been denied by Velpeau, Gerdy, Follin, Joullin, Lamy and others. The arguments which they advance against the entrance of air into the uterine veins are briefly

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as follows: Admitting the fact that air may enter the cavity of the uterus, and that the veins open into this organ by very large mouths, and are provided with valves, they say that the *intra*-vascular pressure is so much greater than the *extra*-vascular that it would be impossible for the air to enter. They claim that the *suction* force exerted by the lungs during inspiration does not extend so far as the uterus; hence, while air may be drawn into the veins of the neck or upper part of the body in this way, the uterine veins will not feel this force at all. Furthermore, they say that even if the *theoretical* possibility of this accident be granted, no case has yet been reported in which the symptoms could not be otherwise explained, as due either to pulmonary embolism, the presence of air from cadaveric decomposition or carelessness in the post-mortem examination and the the entrance of air during its performance.

On the other hand, it is generally acknowledged (1) that air may, and frequently does, enter the uterine cavity; (2) that the veins are devoid of valves and have very large mouths. This much the opponents of this cause of death in childbed are willing to admit. But there is another point of extreme importance, the evidence in favor of which seems to be conclusive, which they are not willing to admit—namely, that the circulation in the uterine veins *is* influenced to a very great degree by the expansion of the thorax during inspiration. The proof of this is partly experimental and partly clinical. Amussat inserted tubes into veins, thus destroying their valves, and then found that the "dangerous inspiratory zone" was of much greater extent than had previously been supposed. Then Dupuytren observed the entrance of air into indurated saphenous veins, and Müller and Franck observed the same thing to occur in the veins of the diploë.

A circumstance which on theoretical grounds would seem to favor the entrance of air into veins by diminishing the intra-vascular pressure, is copious hemorrhage.

The author proceeds next to consider the clinical evidence of the entrance of air into the uterine veins after childbirth, and the results which are said to follow therefrom. A number of cases, he says, have been reported where this accident was supposed to have happened, but in which no proof could be adduced: A case to which he refers is that reported by Lenyon, of San Francisco, where there was no proof whatever that such an accident had occurred. In a second class of cases there is strong presumptive evidence that death re-

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sulted from this cause, but the proof is not absolutely convincing.

In some cases, however, the evidence seems beyond question that air has entered the uterine veins after delivery, causing a train of symptoms which will be described later on, and eventuating in the death of the patient in a very short time. The cases reported by Draper in the *Boston Medical and Surgical Journal* during the present year are, says Dr. Rouxeau, "reported with all the care which it behooves a medico-legal expert to observe."

In answer to the argument that the air in the heart and veins is the product of post-mortem decomposition, Dr. R. replies that "gaseous putrefaction" of the blood is not an early phenomenon of putrefaction. Amussat, even during hot weather, never found gas in the cardiac cavities as early as eighteen or twenty-four hours after death. Draper's autopsies were made eighteen and twenty-three hours after death, respectively, and the bodies exhaled no odor of decomposition, nor did the gas contained in the heart and vessels possess any odor. Davidson's case is still more striking—the autopsy being made two hours after death, a circumstance which Dr. Rouxeau facetiously remarks "may be explained by the fact that the subject was a Hindoo and the physician an Englishman."

It has been claimed by those who deny the possibility of this accident that the air gained access to the venous system during the autopsy. Amussat called attention to the fact that if this were the case, there should be no frothiness and admixture of blood and air. The best way to place this matter beyond question, however, would be to make the autopsy under water, as Delpech did in 1830.

The quantity of air which was observed in the cases of this character which have been reported was much greater than when it has entered other veins, which is to be explained by the great number of the uterine veins and the large size of their mouths.

The symptoms, as might be expected, are sudden and alarming, and death occurs in a very short time. Davidson's patient raised up to take some nourishment, when she suddenly cried out and fell back dead. As a general thing the following picture is presented: A short time after the accouchement the patient, without appreciable cause, becomes greatly agitated, tremulous, and in a few moments loses consciousness; the respiration, which is at first rapid and spasmodic, soon ceases entirely; the pulse, small, rapid and

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irregular, stops in its turn; there are a few convulsive movements, and the patient is dead. A few moments suffice to bring about this disastrous result.

How is death from this cause to be diagnosed? It is precisely similar to that caused by pulmonary embolism in its violent form. The only difference, as Draper remarks, is one of time. Embolism usually occurs during the second or third week after delivery; the entrance of air in the veins, like hemorrhage, occurs nearly always soon after delivery. Nor are these two the only causes of sudden death after delivery; apoplexy, pulmonary congestion, generalized interlobular emphysma of both lungs, etc., may lead to a similar result. These can only be diagnosed with certainty at the autopsy, but many of these cases, as Playfair says, may have been due in reality to entrance of air into the uterine veins.

No treatment can be available in an affection so rapidly fatal. Artificial respiration, which has been suggested, would only increase the difficulty by driving in more air at the forced artificial inspiration.

The only mode of treatment which can possibly be of use is the *preventive;* the uterus should always be stimulated to contraction as soon as possible after delivery, that the mouths of the large venous sinuses may be thereby closed and the entrance of air prevented. The lying-in woman should, for the same reason, avoid taking very deep inspirations; nor should she make any violent exertions. Furthermore, if vaginal injections be employed, care should be exercised that no air be left in the syringe, and thus forced into the uterus.

Dr. Rouxeau, in the last place, warns against the use of a sound in the operation of producing abortion when such a procedure is rendered absolutely necessary. (Both of Draper's cases were due to attempts at criminal abortion.) He states that the instrument may slip between the ovum and uterus and allow the air to enter a vein directly. [This view seems to the translator an erroneous one. In view of the fact that a sharp instrument is much more liable to cause injury to the uterine tissue than a blunt catheter or sound, and the further fact that peritonitis is far more common than the entry of air in the veins, the use of a sharp, "penetrating" instrument in place of the catheter would seem very injudicious.—W. C. D.]

Therapeutic Properties of Nitro-Glycerine.—The action of this drug and its use in practice are still being discussed. At a late meeting of the Société de Therapeutique M. Huchard

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read a paper on the subject, stating in the beginning that the agent had been in use some years in England and America.

The author of the paper stated that he had been making experiments with respect to the physiological action of nitro-glycerine, and had used, for this purpose, a solution composed of from one to six drops of the drug to the hundred of water. Three or four moments after taking it there was headache, vertigo, a sensation of fullness about the head, roaring in the ears and amblyopia. At the same time there were very marked disturbances of the circulation—such as intense congestion of the face, increased rapidity of the heart's action, the pulsations being dichrotous and visible in the carotids, and gradually lessening in force while they become more rapid. Finally, he stated that some experimenters had observed polyuria. It is evident from these symptoms that nitro-glycerine lessens the pressure on the circulatory system, thus causing a temporary hyperæmia of the brain. He thinks it would be serviceable, therefore, on theoretical grounds, in certain cases of aortic disease and in all cases of cerebral anæmia from circulatory disturbances.

He had given nitro-glycerine, he said, in three cases of angina pectoris; in two of these cases there was great benefit derived from the use of the drug; in the third no improvement whatever was noticed.

In a patient suffering from aortic insufficiency the vertigo diminished, and the precordial pain disappeared under its use.

Nitro-glycerine had given good results in nervous affections with cerebral anæmia, in the functional ischæmia of Ball, in the cerebro-cardiac neuropathy of Krishaber, in certain cases of migraine, and in the vertigo of Ménière's disease. M. Huchard had had occasion to try it in two cases of this latter disease, and whilst it had failed in one, the relief in the other had been remarkable.

With respect to the dose, M. H. said that he ordinarily directed a mixture of thirty (30) drops of a solution containing one per cent. of nitro-glycerine and three hundred (300) grammes of water. The dose of this was about a dessert spoonful.

M. Dujardin-Beaumetz said he employed the alcoholic solution of nitro-glycerine; of this he mixed fifteen or twenty drops with 200 grammes of water, and of this mixture he gave three teaspoonfuls a day. There was no doubt, he thought, that the agent possessed the power of causing an intense congestion of the brain, and on that account it was necessary to use it with great caution. Furthermore, the

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indications for its use are very obscure: All that can be said is that it acts like nitrite of amyl, but more energetically. He had never had any accident with it, but in a few cases it had increased a headache which was already present, and in no case had he derived much, if any, benefit from its use.

M. Moutard-Martin thought it unwise to introduce such a remedy into use, and stated that its power for good was very limited, and its power for harm very great. M. Labbé was of the same opinion. M. Constantin Paul had always found the following formula very efficacious in cases of cardiac dyspnœa, and it had the advantage, he said, of being harmless:

Nitric acid.....	1 gram.
Alcohol.....	50 gram.
Water.....	120 gram.

So far as the relative merits of nitrite of amyl and nitro-glycerine are concerned, he much preferred the former, because it was more prompt in its action, a quality of the utmost importance in cases of angina pectoris.

M. Huchard, in closing the discussion, said that dangerous symptoms would only be caused when very large doses were administered. He acknowledged that nitrite of amyl was far preferable to nitro-glycerine during the paroxysm of angina pectoris, but he administered the latter drug during the intervals of attacks with the effect of preventing their occurrence in great measure. While the nitro-glycerine was much slower than amyl nitrite in producing its effects, those effects, when they were produced, lasted much longer than when amyl was used.

Treatment of Tuberculosis with Arsenic.—(By Dr. G. Kempner—*Berliner Klin. Wochenschr.*, No. 31, 1883).—The author of this paper refers, in the first place, to the fact that this mode of treatment is not new, having been recommended by Isnard in France. [This paper (by Isnard) appeared, I think, in 1869, and about the same time, or possibly a few months earlier, M. Moutard-Martin published an article on the same subject. In 1873 a further contribution to the literature of this subject was made by Jaccond.—W. C. D.] But he states that it is only recently since the publication of Buchner's paper that the arsenic treatment of phthisis has met with any favor in Germany. He agrees with Buchner in the statement that the incurable nature of tuberculosis is beyond question; but he thinks this renders it all the more necessary to use means to prevent the development of the disease. In the so-called primary stage of the disease in

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which there is no change in the percussion sound, he believes that a cure may be accomplished so that no residuary of the disease will remain, and that we have in arsenic a drug that will accomplish this result. In other cases, however, no possible good can be obtained from the use of the drug, and the difference between these two classes of cases does not consist so much in the condition of the respiratory organs—that is, in the amount of local disease—as in the general condition of the patients.

There are, he says, four points to be considered in the treatment of phthisis: (1) the diseased product itself, the tuberculous masses and their resulting cavities; (2) the reactive inflammation in the neighborhood of these masses; (3) the general infection with bacilli; (4) the effect of the local disease on the general organism.

The great majority of tubercular patients die, not from a diminution of respiratory surface, but from *consumption*, and this consumption he thinks is due to the infection with bacilli; and it is just here that a clue to the *modus operandi* of arsenic may be obtained. The tubercular masses cannot be destroyed; the bacilli cannot be killed, but the arsenic will prevent the extension of the disease to other parts of the body, and will put a stop to any further infection.

The cases reported by Kempner, which he submitted to the arsenic treatment, were twelve in number.

The diagnosis was based not only on the ordinary physical signs, but on the presence of bacilli in the sputa.

So far as the local disease was concerned, no improvement could be detected after the arsenic treatment had been kept up for eight or nine weeks. Its effect on the cough and the amount of expectoration was very inconstant; in some it checked the cough, and in some it seemed to act as an irritant. So far as the temperature was concerned, too, it had only a secondary effect; there was in nearly all cases a fall after some days or weeks, but it was evidently due to an improvement in the general condition of the patient, and not to any direct antipyretic effect exerted by the drug. The sweating was influenced in a similar manner.

The symptom which showed the greatest change was the appetite. Patients who had showed such an aversion to food that feeding by enema had to be resorted to, took nourishment with a decided relish after taking the arsenic a short time. Now and then the medicine caused griping pain in the stomach, and then opium was added to it or it was discontinued for a few days.

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In the course of two mouths but two of the twelve patients had lost weight, while in others, with whom the arsenic was not employed, there had been a steady loss.

He concludes by saying that until we have some means of killing the bacilli, without killing the patient, the arsenic treatment would seem to be worth trying.

Analyses, Selections, etc.

Double Synchronous Amputation.—Under this title, Dr. E. H. Woolsey, of Oakland, Cal., in the *Transactions of the Medical Society of the State of California*, 1882–'3, presents some very instructive and interesting remarks, accompanied by the report of five cases of double synchronous amputation of the lower extremities which have occurred in his own practice, all being due to "railroad crush." He was successful in saving life in every case but one, and the full clinical record accompanying that shows that the main cause of death was the condition of the patient produced by intemperance. In the general remarks concluding his remarks he says:

Surgical writers all speak of successful synchronous double amputation of the extremities as extremely rare. The foregoing cases are the only cases of the kind I have dealt with; and here we have four recoveries and one death. So far as my reading goes, this success is unparalleled; yet it is still greater than thus represented, as the operation in Case I—case referred to as fatal—may fairly be spoken of as successful, inasmuch as the patient survived and recovered from all the principal dangers, such as shock, hemorrhage, and the amputations proper, and lived eleven days to succumb to other causes. This case, however, I did not treat after amputation. The other cases I not only operated upon, but treated to the end, and they are all living and all walking on artificial limbs.

Besides a few isolated cases in various parts of the world, briefly referred to in text-books on surgery, the only statistics on synchronous double amputation I have been able to find, are submitted by Professor John Ashhurst, Jr., of cases occurring in his own practice, in his article on Amputation in the new *International Encyclopedia of Surgery*, Vol. 1, p. 592.*

*Since this paper was submitted, another volume of the SURGICAL HISTORY OF THE WAR OF THE REBELLION has been issued, and contains a brief record of a number of successful double amputations, but they were all on account of gunshot wounds.

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I find recorded here nine cases of double amputation on account of injury (crush)—only nine cases analagous to mine. Of these, two recovered and seven died. One of the two that recovered—Case VI, "amputation at right hip joint and of left leg at middle"—is claimed by the writer to be the only successful case of the kind on record, and doubtless justly so, and was, I will admit, a graver case than any of mine, though in my list Cases II and III were very nearly as severe. Figuring on the rates of mortality in single amputations, in the absence of known rates for double amputations, adding the rate of one amputation to that of the other, on the assumption that the severity of like double crush and and amputation will be twice as great as single crush and amputation, it will be found that the success of Professor Ashhurst, in saving two out of nine cases, is above the estimated average.

The concussion or shock of an injury seems to depend chiefly upon the nature of the impingement. The shock of a bullet, for example, is comparatively insignificant to that of a cannon ball or the ponderous crush of a locomotive. Generally speaking, the greater the mass of the impinging body the greater the shock; for example, a bullet of high velocity striking a window pane simply perforates it, while a blow from a hammer, of less velocity but greater weight, transmits vibrations to the whole pane which shiver it to pieces. In railroad crush, shock is by far the most dangerous factor. The danger incident to amputation itself in such cases is probably very slight, if, indeed it be not wholly offset by the immediate advantage resulting from a severence of injured parts.

In secondary amputation for disease there is always shock; but in amputation for railroad crush the shock of operation is rarely appreciable. It is drowned, as it were, by the shock of injury; and the reason for this difference is evident, for in the former case the shock incident to ablation follows the knife, while in the latter the shock of ablation, or worse than ablation—avulsion or crush—originates with the injury, is persistent, and, according to my experience, is very rarely dissipated until after the use of the knife. The shock of the knife, here, is like the shock of glad tidings to a person overwhelmed by grief; and the relief obtained by the separation of crushed tissues may be likened to the alleviation of morbid mental impressions, induced by the severance of relations associated with the cause. From these several considerations it follows: that if a person with crush

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of an extremity be not operated on during shock and yet live, he must incur still greater danger by delay, by having to overcome all the agony, and the prolongation of the shock effects, occasioned by the retention and continued association of mutilated parts; and then, with irritated nerve centers—morbidly sensitive to impressions of injury, submit to the operation of amputation.

The teaching that has been handed down to us from one writer to another, that we should wait for reaction from shock before making amputation, is in my opinion an hereditary error. My experience warrants the belief that persons with crush of one or more extremities are more apt to die from shock alone, than from shock and amputation; or, in other words, that the surgeon who waits in such cases for complete reaction will generally be disappointed; while he who operates early, or during shock, will usually have the satisfaction, at least, of seeing his patient survive the immediate effects of injury.

In nearly every one of my successful cases of amputation (about seventy-five) the probability of recovery from shock at the time of operation seemed exceedingly small, and in every one of the five cases here reported, reaction from shock seemed almost impossible. But these cases last mentioned did react; and is not this circumstance a somewhat convincing proof of the impropriety of delay? Though the doctrine, not to amputate during shock, is maintained in our text-books of surgery, and is a convenient doctrine for the timid surgeon, who would sooner see his patient expire serenely in bed than take the risk of his dying on the operating table and be charged with recklessness, etc., it is not based on experience; is not supported by statistical data.

Statistics on the relative success of primary and secondary amputations in traumatic cases, or cases of railroad crush—for we are speaking of injuries accompanied by the greatest degree of shock—are not sufficient; for on the one hand, the patient who fully recovers from shock and lives for some days before being operated on, may be considered a safe subject to deal with, while the average patient operated upon immediately after injury may be presumed to have either greater shock, or less resistance. What we want is a record of the relative mortality between cases of shock from crush, operated on before reaction, and like cases, where the doctrine of waiting for reaction is applied, whether operated upon or not. But statistics on the doctrinal side will probably not appear very soon, for the disciples of the dogma of delay will

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not father their cases of shock that die before reaction, though they may wait through a whole night or day, just as kind hearted physicians have been known to prescribe liniments for dislocated joints, and wait for weeks for nature to do the surgery, and then send the patient to the Springs.

In most cases of railroad crush the hemorrhage is considerable, and in many cases, if not speedily controlled, will prove fatal. The occurrence of syncope from hemorrhage is a serious complication, pointing to a slowing of the circulation, which may end in stasis and heart clot. The occurrence of the latter, however, may alone result from the paralyzing influence of shock upon the heart. But the occurrence of heart clot, though probably almost always fatal, is not necessarily so. A moderate loss of blood does not seem to interfere in any way with recovery, and patients frequently withstand great losses of blood without apparent injury. In all my cases of excessive hemorrhage from crush, where recovery followed, except Case V, no complication ensued that could fairly be attributed to loss of blood; while, on the other hand, in many cases where there was but little if any hemorrhage at the time of injury and amputation, troublesome complications of hyperæmia and excessive vascularity occurred, which seemed to result from intra-vascular pressure, caused by forced retention within the body of an excess of blood over the requirements after amputation. Where no hemorrhage occurs, it seems reasonable that the blood contained in a limb to be amputated will not be required after amputation, and that in such a case the use of Esmarch's bandage in forcing the blood of the extremity back into the general circulation, would do positive harm; and my experience shows that in other cases the compression of an artery by an assistant, or the tourniquet, is a sufficient safeguard.

In railroad crush of the extremities, the tissues are usually contused higher up than they appear to be at first, and for this reason it is better to amputate high where practicable; and in crush at the ankle joint, for example, it is always practicable to go well up to the middle of the leg, or above this point, for a leg stump of from six to eight inches, is the ideal length for the application of an artificial limb, and a three, or even a two inch stump is better than a long stump—amputation just above the ankle joint, for example. Just here I may say that I have made secondary amputation of the leg, principally on account of stumps being too long for artificial limbs, in two cases, successfully, where amputation had been previously performed by other surgeons.

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Flaps of contused skin are sure to slough, and are extremely liable to become gangrenous. To include in the covering of a stump any portion of contused skin or tissue, where it can be avoided, is therefore unjustifiable, for by so doing repair of the stump by first intention will be impossible, and the result at best will be imperfect; the case will inevitably be prolonged, and secondary amputation may become necessary, and the life of the patient otherwise placed in jeopardy. Still, conservative surgery may be carried far at the foot, since it is more often successful here than elsewhere, except at the hand, and for the further reason that, in the event of failure, amputation can usually be performed at the leg so as to give a stump of useful length.

Amputation of the foot, however, should never, in my judgment, be made above the tarso-metatarsal articulation. An artificial leg is a more graceful and a more useful appendage than any Chopart or Syme stump I have ever seen, and a Pirigoff stump is neither useful nor ornamental. All things being equal, the danger of amputation of the leg is of course somewhat greater than that of the foot, but in crush, things are not equal, and amputation, through contused and lacerated tissues at the foot, is obviously more dangerous, taking the case in its entirety, than through perfectly sound tissues at the leg. However, while the saving of life is probably a paramount duty, the saving and spoiling of a life at the same time must be considered a very questionable procedure. To amputate therefore, at a point which promises to give the best ultimate result—the greatest degree of usefulness, will prove to be the best surgery; for then, if your patient lives, he will be sure to praise you, and if he dies, his curses cannot seriously affect your reputation.

Sloughing and putrefaction are much more likely to occur in double than single amputation, or in amputation of the thigh than in amputation of the leg; or, in other words, the greater the solution of continuity, the greater the liability to disintegration and death of wounded tissues. But in double amputation, as in other dual wounds of like magnitude in the same person, it will generally be found that one wound will heal more rapidly than the other. It may not always be the best appearing wound at the start which ultimately does the best; for while both wounds usually slough, if one does, one of them may begin to slough first and emerge from the process so far in advance of the other as to heal first. On the other hand, the tone of the system may become so improved during the period of sloughing in the first stump

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and enable the latter to heal first. Aside from the danger of local infection of one stump by the other through accident, disease of one stump superinduces disease in the other by an impairment of vitality in the tissues through systemic infection. The disturbance in one stump, whatever it may be—from irritation to gangrene—may react injuriously upon the other. This play of morbid reaction is an element of injury not possible in single amputation. In double amputation, there is twice as much pain and irritation as in single amputation; and it is conceivable that every twinge of pain, and every thrill of irritation, must make a definite morbid impress upon the organism, and aid in the lowering of vitality, and in the production of nervous and inflammatory phenomena, and assist in the determination of the display of such phenomena.

Marsh Mallow in Palmar Psoriasis.—In *The Practitioner*, November, 1883, Dr. F. C. Berry, of Lynton, North Devon, England, has a short, but interesting article on the above subject, from which we take the following:

In all country districts, but more especially in one which is situated twenty miles from the nearest railway station, the regular medical man has to contend with a host of amateurs, generally old women, who consider themselves, and are, by virtue of their age and experience, held by their neighbors to be learned in the healing properties of the herbs indigenous to the locality.

The case which drew my attention to the value of some of their applications, and which I have taken for the text of this short paper, was one of palmar psoriasis of long standing and unusual obstinacy to treatment. The patient was an old man.

I prescribed Fowler's solution in three-drop doses three times a day, ordered him to wash his hand well with soft soap night and morning, and then to apply an ointment composed of chrysophanic acid and vaseline. This treatment was continued for some weeks, but did not appear to produce any marked improvement. I then tried in turn oil of cade and vaseline, ammoniated mercury ointment, and Wright's liquor carbonis detergens as a lotion. None of these measures were successful. The old woman then appeared on the scene, informed me it was due to a "chill in the blood," and that she had seen similar cases cured by marsh mallow ointment. I doubted its efficacy, but willingly allowed my patient to try it. The first application relieved

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the irritation, and in a month the skin of the hand had almost regained its natural appearance. I should add that she was pleased to approve of the washings with soft soap, and this was continued while applying the ointment, but the internal administration of arsenic was stopped. The disease appeared again in a short time, but a fresh application of the ointment cured it at once.

The *althæa officinalis*, or marsh mallow, belongs to the natural order *Malvaceæ*, and is to be found growing plentifully in most European countries. On the Continent, especially in France, it is highly esteemed for its demulcent properties. Both the leaves and roots are used, and are given internally for various affections of the mucous membranes. A favorite remedy in France for sore throat is *pâte de guimauve*, which is a kind of lozenge made with mucilage of althæa, gum-arabic, sugar, and white of egg. Recipes for a decoction and syrup of althæa were to be found in the old London Pharmecopœia. In this part of the country the ointment is the favorite preparation, and is made by cutting the fresh leaves into small pieces, stirring them together with lard, and boiling the mixture for half an hour, after which process the mixture is strained through muslin or through a common kitchen strainer, and is then ready for use.

Sugar as a Dressing for Wounds.—Under this head *The Medical Age*, November 10, 1883, has the following:

The British Medical Journal quotes from an article by Dr. F. Fischer, in the *Centralblatt für Chirurgie*, in which he details the use and results of the use of cane sugar as an antiseptic dressing for wounds in the Strasburg Hospital. Hitherto the sugar has been finely powered and used in combination with napthaline, equal parts, or with iodoform, one part to five of sugar. In cases of wounds united by suture the mixture is put up in gauze and applied to the part. Where there is loss of skin the sugar is sprinkled directly over the parts. The sugar dressing is fixed in place by some layers of gauze, deprived of fat, over which a layer of gutta percha is applied, and the whole secured by a bandage. The sugar dressing may remain from eight to fourteen days without the sugar dissolving. The secretion from the wound is equally distributed with the sugar, and it is only when the layer of sugar is too thick (more than about one-fifth of an inch) that lumps or formed. Healthy granulations with no tendency to bleed are developed, and cicatrization proceeds rapidly. In wounds united by suture, healing by the first intention

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has always been observed. Dr. Fischer is not able to say whether the sugar is decomposed, or what new products are formed.

Another writer, Dr. Windelschmidt, reports the use of sugar alone as a dressing, with good results. He finds that for small wounds and ulcers, powered cane sugar is not inferior to iodoform as a dressing, while iodoform is necessary in many cases, such as chancres and mammary abcesses. He calls attention to the fact that powdered sugar is a very old popular remedy in cases of fungous granulations, ichorous eczema, and erysipelas of the face. He thinks that sugar, like iodoform, has its sphere of application, and joins Dr. Fischer in recommending that it be more extensively tried.

Barnes' Dilator in Placenta Prævia.—In the *Transactions of the St. Louis Obstetrical and Gynecological Society*, 1882–'3, Dr. M. Yarnall, of St. Louis, reports eighteen casesof placenta prævia occurring in his practice, and in the course of his article he objects strongly to the use of the dilator mentioned, in that unfortunate complication. His argument against it is well worth repeating. He says:

"In relation to my objections to Barnes' dilator, it is proper to give my reasons for condemning this instrument. To those who have endeavored to use it in placenta prævia cases my objections are unnecessary; but to those who may be tempted to try it I will offer what I deem unanswerable reasons, sustained by observation. The os uteri is a soft ring, more or less rigid, and more or less dilatable. In placenta prævia, if the head or the breach of the child is presenting, it will press down the placenta so as to prevent the introduction of the water bag, or if the resistance is not great, it will become so; as we dilate the bag with water it will be forced into the vagina; in short, it cannot be kept in position. Should no resistance be offered by the presenting placenta and the fœtus behind it—and this will be the case where the child lies crosswise, and these transverse positions constitute a large proportion of placenta prævia cases,—then there being but slight resistance, the water bag will slip above the ring formed by the os; as it does so the patient will probably bleed to death, owing to the opened sinuses caused by the detachment of the placenta; this may occur while we are manipulating. It requires time to introduce and dilate the bag with water; it may be but a moment of time, but in placenta prævia a moment may break the link that holds to life. I say, from actual observation, that this

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soft rubber bag cannot be retained in position; it will either go beyond the os into the cavity of the womb or it will slip out into the vagina. I defy the most expert operator to keep it in position. The water bag may in some cases, other than placenta prævia, be useful as a dilator; I, however, have been unable to accomplish good with it. I have used, or rather attempted to use it, in cases of contracted pelvis when I wished to dilate the neck in order to bring on premature labor; and while I have found the Molesworth dilator useful, the Barnes water bag has, in my hands, proved impracticable and worthless."

Fractures of the Skull.—In *The Louisville Medical News*, November 10th, 1883, Dr. W. W. Cleaver, in an article read before the Buck-Fork Medical Association, at Bardstown, Ky., October 16, 1883, presents a series of cases of fractures of the skull which have falleh under his own observation, some of them, either in history or recovery, being so instructive that we give them in his own words,—

"In 1848, while a student, I was asked to see a boy, aged fifteen, who had just been accidentally shot by a comrade with an old brass barrelled pistol which carried a pretty large ball. I found him lying on his back, his eyes set in his head, and brains protruding freely from a wound in his forehead. The wound was about one and a half inches above and external to his eye. There were two bullet-holes in the scalp very near each other; I supposed the pistol had carried two balls. I wiped away brains enough to fill a tablespoon. I found a single opening in the skull not larger than a good sized pistol-ball. I pronounced the case fatal; but sent to town for a doctor. One came, confirmed my diagnosis and prognosis. He was not the family physician, but we prescribed for the boy and left. Next morning I returned with the family physician and my preceptor. They took charge of the case. I watched the patient, and assisted the physician. The patient was stimulated and nourished in the best possible manner. The boy was still totally unconscious and almost lifeless. The additional treatment was calomel, followed by an enema, with a cold compress to the wound. After the removal of all spicula of bone, and smoothing up as best they could the small hole, the question was, did the ball go into the head and remain, or did it enter through one of the holes in the scalp, shiver the bone and rebound, passing out through the other hole? That question has never been answered. The boy recovered, and is now living with his family in Larue county, Ky.

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In 1861, M. C., leaving town drunk, engaged in a horse-race on the pike. In passing a skirt of timber the horse left the road, running at full speed; the man reeled to one side, and held on by throwing his arms around the neck of the horse. He passed so near a large tree as to drive the man's head against it so hard that it drove in the bark and sap of the tree as though it had been struck with the pole of an ax. I was but a mile away, and the messenger said the man was dead, but he wished me to see him. In a short time I was on the spot, but found that my patient had been carried on down the road in a buggy; I overtook him, finding him half rational. He was conveyed two miles, then taken to a house, and put to bed. In a few moments he arose, walked across the room, stood and urinated freely; was somewhat more rational. He had two fractures, meeting at right angles, almost in the centre of the frontal bone. There was slight depression. The scalp wound was almost equal to the fractures. He got active antiphlogistic treatment for three days, when he was removed to his own home, a distance of two miles. He bled well at the time, from the wounds, nose and ears. At the end of two weeks we regarded him nearly well. He suddenly became furiously wild, and we were compelled to restrain him for weeks. It was suggested to send him to an asylum, but his mother declined. I proposed to trephine him, but that too was declined. He had occasional lucid intervals. When his mother was about ready to consent to the operation, he got better and spoiled it all by a perfect recovery, joined the Federal army, and died at Andersonville, Ga., a prisoner. Although this man made a good recovery without the operation, it would have been better to do it than to have sent him to an asylum. The case was under my care for two months. I supposed the symptoms were due to a clot under the cranial bone, but I might have missed it, had I trephined. The removal of a portion of bone would, in all probability, have compensated for the pressure from the coagula.

In 1868, I was called to the country at night to see a man about thirty years of age; found him cut and sliced in the head, shoulders, and back. He looked very much like a piece of pork prepared for roasting, and I was shown a large pocket-knife with which the work was said to have been done; two-thirds of the blade were broken off. He had two or three deep cuts, but I failed to find the knife-blade. One cut was in the temporal bone, which had evidently gone through. I sewed and plastered him, and left. I saw him

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no more until he came to my office, about well. A few months after he moved away, and remained a year or more. While absent he consulted a doctor for a tumor in the roof of his mouth, at which time the physician found the knife-blade, and extracted it. A few months after this he started back to my neighborhood, and in town some of his stock ran and he after them on foot. He suddenly stopped, reeled, fell, and died in a few moments. This was a brother to the man who was struck by the tree. No post-mortem.

In 1875, a child of Mr. W., aged two years, fell from an upper hall to the floor below, a distance of twelve feet. The child was delicate and strumous, with sore eyes for a year or more. Dr. W. E. Mattingly arrived about the time I did. We found the head literally crushed. I took hold of it, and the entire head crepitated under the pressure. We applied a bandage to hold it in shape until the child could die. A few hours after our visit the child began to have spasms. We removed the bandage, enveloped the head in a wet towel, and put some calomel on the tongue. Next morning we found it doing well. The bowels were moved with castor-oil and a turpentine enema. The cold compress was continued. It had no more convulsions after the removal of the bandage. It made a rapid and seemingly good recovery, and I lost sight of the patient for weeks. Finally the little girl was brought to my office in its buggy, looking the picture of health; the eyes were sound and well for the first time for over a year. Upon examination I found a fluctuating tumor, larger than my thumb, six inches long, beginning just above the eye and passing back diagonally, crossing three sutures, and terminating in the occipital bone. Manipulating, I discovered that under this long tumor there was a groove, as it were, in the bone, with a rough bottom, the diploë. The groove was from one-half to one and three-quarter inches wide. I could not well see how the external plate had separated from that groove; the fluid had not been there sufficiently long to cause the absorption from pressure. I was then undecided, as I am now, as to how the groove came, but I believe the fluid came from within, through a small orifice of the inner cranial table. I showed the case to Dr. Elbec, of the United States army. He said he had never seen anything like it. After consultation, we determined to empty the sac with a hypodermic syringe, and succeeded. We shaved the head, applied adhesive strips and a many tailed bandage. The dressings were torn away twice by the child. Then we determined to let it alone and wait until

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the plugging up of the opening should stop the exudation of the fluid, expecting absorption of that which was in the sac. All this occurred after a while, and the grove is gradually filling up, though perceptible yet, after existing eight years. The girl is now the best looking and smartest child of a large family of bright children. The scrofulous symptoms have never returned.

In 1874, Mr. M. was quarrying rock. While the hands were holding up a large stone he put down his head to look under it; the stone fell, and a corner struck him on the top of the head, inflicting a scalp wound, with considerable shock. I could detect no fracture. He came to my office frequently to see me. The wound suppurated freely and refused to heal readily, as scalp wounds are wont to do. Finally I discovered a large circular piece of bone, two and one-half inches in diameter, somewhat loose, and in moving it matter came from under it. In a short time I was able, with the stout forceps, to remove the bone, and he recovered quickly. He is now well and stout."

[The following case, occurring in our own practice in this city, (Richmond, Va.), although perhaps not to be ranked with the plainly apparent fractures of the skull which Dr. Cleaver relates, is yet extremely interesting from the peculiar symptoms of fracture of base of cranium followed by recovery.

Mrs. W. aged 60 years, in full possession of health and faculties, was thrown with great violence from her carriage in the summer of 1880. The buggy was drawn by a runaway horse going at a high rate of speed, and was brought to a sudden halt by the striking of the front axle against a stout post; the concussion being so great that she was thrown over the dashboard and horse a distance of over eighteen feet, alighting upon the head and side of the body on the stones of the street. Extreme hæmorrhage from the nose, mouth and ears at once took place, and continued after removal to her home, for twenty-four hours from the ears, the posterior nares being soon plugged by the attendant. Examination showed no fracture of the skull appreciable. She was totally insensible from the time of the accident for a period of three weeks. Convulsions began four hours after the injury and continued irregularly for three days. Deglutition was impossible for over two weeks, all food and medicines being administered by the rectum. The functions of micturition and defecation were properly carried on during the time of insensibility, although of course involuntarily.

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About the end of the third week, sensibility began to return by very slow degrees, but memory did not become established in any degree until the fifth or sixth week. The first recollections were of the period of childhood, then of girlhood, continuing in a slowly progressive manner until a period of time two weeks before the accident was reached, where they ceased, and the patient has never been able to close the gap in her life between that time and the day when she became conscious of her surroundings, about four weeks after the injury. The patient is now as sound in mind and body, with the above exception, as any lady of sixty-three could expect, there being no sequela of the accident discernible.

The case is briefly noted here in this connection, because as far as our reading and observation go, it is unique, and was possibly a severe fracture of the base of skull, with an extremely favorable result. The diagnosis of fracture of base of the cranium was confirmed by consultations with two of the most eminent surgeons of the South, and the prognosis was pronounced unfavorable from the first. EDITOR.

The Embryo Physician as a Specialist.—From the *Transactions of the Texas State Medical Association*, 1883, we take the following extracts from an interesting address delivered by Dr. T. H. Nott, of Goliad, Texas, on the above named subject.

In the good old times gone by a specialist was "a physician and something more." A physician, who having grown ripe in years, in knowledge and in experience, who, having learned all that his co-laborers and general practical experience could teach him, and not yet being satisfied, singles out that branch for which he has proved himself best fitted and in which he has been most successful, and by concentrating his energies, backed by a ripe experience, he pushes forward into paths before untrodden and opens up new fields of labor as far in advance of the general practitioner, as the electric light is of common gas.

This gentleman is what *was* a specialist, and now what *is* a specialist? As our late retiring President of the American Medical Association happily expresses it, "Something less than a physician." A sort of one-horse doctor. Not a man, who having proved himself a physician, has a right to select that branch for which he finds himself best suited, but one who guesses that he will make a good oculist, gynecologist or dermatologist, as the case may be. In not a few in-

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stances his father guesses for him that he was born for an oculist. Accordingly, an oculist is selected as his preceptor. He finally graduates at college by scratching through on six branches and taking the highest prize on the branch selected for his future specialty. He is now put into an eye hospital at home for a year, then sent abroad to attend the eye-clinic of Donders, Wells, Stelwag or some other foreign celebrity, and then returns to some of our cities to practice ophthalmology. He knows a Bright's retina, choked disk, gray atrophy, blue atrophy, etc.; can talk and write learnedly of far points, near points, angles and technicalities that few of us ever heard of, and he can use a knife beautifully, for he has spent hours practicing on pig's eyes and sheep's eyes, and polished off with rabbit's eyes, which I believe are said to be the most difficult to operate upon. He brings letters of recommendation from several foreign professors, and from his old tutor at home. He settles in a town of twenty or thirty thousand inhabitants which is crowded with several dozen physicians, but which will only support one oculist, and he has the cheek to ask and expect all the physicians of his city, and all the surrounding towns, to send him their eye cases and drum for him. He sends his advertisements to the country papers around, and has them printed in two or more languages. He sits back on his dignity and grows rich and famous, while we struggle for a living and a small reputation and drum for him. But, why is it that he thus deceives us and the people? For two reasons—first, most of us know so little about the eye; and second, because he operates so beautifully, we take it for granted that he knows the rest. Because he can extract a cataract, straighten a crossed eye, or do an iridectomy, we believe him to be an experienced oculist. But, gentlemen, be not deceived; he is a born specialist. He knows nothing but the eye, and therefore cannot know the eye. He has studied it as he would a mistletoe bough, without knowing anything of the tree or the atmosphere whence it derives its sustenance. True, he operated beautifully; he learned it at Vienna, or Paris, or Berlin, on pig's eyes. But does he know when to operate, or perhaps better, when *not* to operate? And outside of the knife, what does he know? What of malaria, neuralgia, indigestion, torpid liver, brain diseases, uterine diseases, and a hundred more diseases and conditions which affect the eyes and require treatment before the eye trouble can be relieved?

To the general practitioner, ocular therapeutics may suggest a blue mass pill, twenty grains of quinine, hydrochloric

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acid, potassium bi-carbonate, iodides, etc., as the eye trouble proceeds from derangement of the liver, malaria, indigestion, brain diseases, etc. To the oculist born, ocular therapeutics at once suggest atropine, eserine, boracic acid, together with knives, hooks and spoons of various shapes and sizes. Uterine therapeutics to our older gynæcologists may mean the major portion of our general therapeutics, while to the gynæcologist born, it alludes only to nitrate of silver, acid chromic, iodoform, carbolic acid, specula, tenacula, applications, curettes, needles, silver wire, etc.

To our older laryngologists, the therapeutics of the larynx and pharynx may suggest cod liver oil, wine, mountains, Colorado or Florida. To the laryngologist born it at once suggests mops, swabs, sprays, insufflators, respirators, etc.

If one man takes the eye, another the ear, another the brain and spinal cord, another throat and larynx, another genito-urinary diseases of the male, another genito-urinary diseases of the female, another diseases of the chest, another diseases of the bones and deformities, another the teeth, another diseases of children, then there is nothing left for the general practitioner but the abdominal viscera (nothing but guts) to study. Is it possible to divide up so complex a machinery as the human system and understand one part ab initio? When we have studied it as a whole for years, and then isolate a single organ or system as our special study, it is with difficulty that we partially comprehend its workings, and impossible to explain many of its diseases and their rational treatment. What then can a man know of any part of the human system who has not studied the whole?

Again, I would ask, if the first generation of young specialists who have been tutored by our old specialists, who were general practitioners, furnish such examples as these, what, for Heaven's sake, will be the type of the second and third generations of specialists who must be tutored by these born specialists? Fortunately for mankind this in-and-in breeding would soon extinguish the species; but, alas, for our profession, we must suffer so severely from the reaction and be thrown back a quarter or half century and begin again to train general practitioners before we can have the material out of which to make a specialist worthy the title. This must be our fate, unless we at once discontinue this ruinous practice of attempting to born specialists, while we yet have an abundance of material among our experienced general practitioners to make specialists, who will be blessings to mankind, honors

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to our profession and leaders and teachers in every branch of medicine. I see from a recent number of the New York *Medical Record*, where at a collation of the dentists in Cincinnati or Chicago, one of their profession predicts that the time is near at hand when a man will not be allowed to practice dentistry without a thorough medical education. Only yesterday a gentleman of high culture (an Episcopal Bishop) said to me: "I am afraid of a young specialist." Now, if the dentists and laymen are becoming afraid of born specialists, how much more should we be afraid of them, who know so well what they are! Can we remain so blinded to the interests of our noble calling, as not to see defects so patent to the outside world? Can we afford to see our standard thus lowered, while we are pretending to be so clamorous for a higher standard? Dr. G——— very happily fits Bacon's definition of a clever man to that which a specialist should be, a man who knows something about everything, and everything about something. The sooner we accept this as our standard, the sooner we realize the fact that a specialist should be something more than a physician, the sooner will we be prepared to raise our standard of medical education. But so long as we allow ourselves to be deceived and accept as our superiors men who are much less physicians, just so long will we retard our progress and retrograde our standard. In conclusion, I would say, if there are any young specialists present, that, while I intend nothing in the least degree personal, still I make no exceptions in any one's favor. The principle is radically wrong, and I am opposed to it, and hope that our young specialists will see the error of their ways before it is too late and turn to the general practice of medicine, and make physicians of themselves before they try to become specialists.

And, now, while our illustrious President and this honorable body are, from a spirit of philanthropy, using their utmost endeavors to procure legislation on hygiene, quarantine, regulating practice of medicine, board of health, home for inebriates, etc., etc., let us not forget the mass of our people who are afflicted in the line of some specialist. Let us put in a plea to keep our people out of the hands of the born specialist, by inserting a clause in the article regulating the practice of medicine, which shall forbid any person to practice a specialty in this State who has not done a general practice for at least ten years.

As to the admitted ignorance of the general practitioner concerning special diseases, it is very much like the assumed

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knowledge of the young specialist, viz: More imaginary than real, and while it would require years for the young specialist to acquire that general experience which is so indispensable to a man who proposes to make a specialist of himself, it would require but a few months for the man who has already toiled for his experience, and who knows for what branch he is best fitted to brush off his supposed ignorance, and acquire all that is known on any special branch. A few months private course in a special hospital under an old specialist will make a better dentist, gynæcologist or laryngologist out of an experienced general practitioner than the man who enters the profession as a specialist can make in a life-time.

Again we are told by the oculists and ovariotomists that none should dare attempt an operation for the removal of cataract or ovarian tumor, except the specialist of large experience.

Now these men of vast experience cannot live always, and who, I would ask, are to be their successors? It reminds me of the advice of the innocent old lady to her son, "That he should never go in the water until he had become an expert swimmer."

Treatment of Internal Hæmorrhoids by the Hypodermic Injection of Carbolic Acid.—In the *Transactions of the Texas State Medical Association*, 1883, Dr. W. D. Davis, of Grapevine, Texas, gives a record of a number of cases of internal hæmorrhoids successfully treated by means of hypodermic injections of pure carbolic acid, and at the close of his article gives the following description of what his considerable experience denotes as the best method of procedure.

He says: I have no rule regarding the point at which to introduce my needle, except that I select that from which all parts of the tumor under treatment can most easily be reached.

The injection should be performed slowly, and its effect upon the tumor watched with care, bearing in mind that it will require, particularly in large tumors, and when the eye of the needle is some distance from the surface, several seconds for the effects to become visible; but anon a white point will make its appearance on that part of tumor having immediate circulative connection with the interior part where the eye of the needle may rest, then another and another from each of which stellate projections may be seen to shoot in every direction, and from these others branch off, pre-

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senting, secondarily, an arborescent picture, coalescing one with another, and widening as they proceed until the entire surface in such region becomes white. Then the needle should be partially withdrawn, and sent to such other parts of tumor that may not have been coagulated, thus continuing, until the entire tumor is thoroughly solidified, as shown by its white circumference and hard, woody feel.

In the partial and final withdrawal of the needle, I do it slowly and with a rotary movement, for the needle itself becomes incorporated with or is adherent to the coagulum, and a hurried or direct withdrawal is generally followed by passive hemorrhage, which, though it is of no moment, and of short duration, might as well be avoided for the sake of neatness.

The amount of acid to be thrown in varies according to the size of the tumor, usually from two to fifteen minims, though I am not so particularly nice about this, since I do not believe there is any danger from carbolic acid poisoning with chemically pure acid.

It is important that tumors, the anus and parts for some distance around be smeared with vaseline or some oleaginous substance previous to operating, to prevent excoriations from the drainage that frequently occurs in the track of the needle immediately after withdrawal.

I have had more trouble with small tumors than large ones; because, first, it is more difficult to fix them for the introduction of the needle: and, second, because they are so liable to be transfixed, which accident is always to be avoided.

Tumors almost invariably begin to enlarge as soon as injections are begun, and continue to do so to their full capacity of distention.

It is a rule with me to operate in immediate succession on all tumors that present themselves or can be found. Frequently, however, they are in a collapsed state, and sometimes difficult to define, though usually one or more can be made out, into the most favorable of which I introduce the needle. By the following day all other tumors that may be present will be swollen or congested, and can be easily treated.

I used the chemically pure acid four years ago (1879), before I had seen any mention of it in this connection, nor am I yet aware that other operators use it so, though there is a growing tendency in that direction. I use the acid pure, because I find that it acts more quickly and effectually, is

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more easily forced through an ordinary hypodermic needle than the various glycerole dilutions, and I believe that from its more rapidly coagulating and thoroughly cooking, as it were, the tumors, there is less liability to that greatest theoretical objection to the operation—embolism.

Observations on Sponge Grafting.—Dr. Edward Borck, of St. Louis, in an article read before the Tri-State Medical Society, Sept. 19, 1883, and published in *The Weekly Medical Review*, Nov. 3, 1883, gives the following interesting account of his experience with sponge grafting. Anything from this gentleman's pen is always well worth reproduction. He says:—

Sponge dressing is antique, and sponge grafting has been in use for a long time; I cannot tell, however, who the genius was that first employed it. The grafts are prepared in different ways, every one to his own notion. As a rule, in general, a fine piece of sponge (Turkish) is soaked first in some of the diluted acids, then washed with an alkaline solution, and kept in an antiseptic preparation, such as Listerine, ready for use.

This graft is prepared thus: a fine sponge is soaked four or five days in a twenty per cent. solution of hydrochloric acid, then taken out and squeezed dry, and put into or saturated with a mixture of one drachm of iodoform to one ounce of sulphuric ether, for a day or two, air tight; after this the ether is evaporated and the sponge is ready for use, and is kept in an air tight vessel. A second method is, to put the sponge for a few days in the twenty per cent. solution of the acid, then remove it and preserve it in carbolized castor oil, strength of ten and a half per cent., ready for use.

I will now illustrate with a few cases from private and dispensary practice my experience with sponge grafting:

A gentleman who had indolent ulcers on his left leg for the last eleven years, was sent to me by his physician. He was depressed in spirit, suffered great pain at night, and consequently loss of sleep; he had tried everything in vain; his doctor told him to try the rubber bandage, which he did, twisting it around his leg without any benefit but injury. Why? Because his doctor did not teach him how to apply it. There was no history of any specific disease; injury was given as first cause. I encouraged the patient by telling him that if he carried out my treatment faithfully for twelve months, his leg might get well. I put him upon an alterative treatment, with good diet and rest; sprinkled the ulcers with

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iodoform and simple dressing. "Iodoform dissolved in æther and used with a spray, covers wounds very nicely and thoroughly." As soon as the ulcers began to look healthy, I grafted into them pieces of sponge prepared by formula No. 1, cut across the grain one line in thickness, covered with mole skin plaster, I prefer that plaster because it is soft (it need not be heated nor be wet), and taught him how to apply the rubber bandage. One week later I removed the plaster, but not the sponge; it had firmly adhered, the leg looked well, granulations sprung up nicely through the sponge, though the sponge seemed to be at least one-half absorbed. I have tried in other cases the removal of the sponge every second or third day, as recommended by some, but I know by experience that such only disturbs the granulations. Unless the sponge graft falls off by itself I do not replace it by new pieces; if it has loosened one-half or one-fourth I cut the loose part off and replace it by fresh, and do not disturb that part which has adhered. It required but three or four new grafts; the ulcers healed; the man felt happy. Cotton bandage will answer when the rubber cannot be obtained. Other and similar cases I treated with the same good result. Now my success with the sponge prepared according to formula No. 2, has not been so good; however, it answered in my hands as an elegant dressing in unhealthy suppurating ulcers. So long as the ulcers are in such a state, the dressing has to be renewed daily, until the constitution is improved and healthy granulations begin to spring up, then its usefulness ceases, and formula No. 1 has to be resorted to.

One other case, a lady patient of mine suffered from the sequelæ of syphilitic infection, "primary sore received six years previous. When I first saw her the whole left gluteal region was eaten out; thin, watery, offensive matter ran from that and other sores that were scattered here and there; the throat was also ulcerated. I put her upon constitutional treatment, and the sponge dressing. After careful treatment for several months, the system improved and the sores began to look healthy; now I instituted the sponge grafting, and actually the result was far beyond my expectation. It seemed that the whole gluteal muscle was reproduced again with strong skin covering.

But sponge grafting can be used for other wounds. I saw an account in a medical journal where a child had burned its hands, the cicatrix contracted leaving the fingers in extension, consequently they were of little use; the surgeon made

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at intervals transverse cuts over the joints of the fingers, and planted sponge into the wounds; the result obtained was good. I have seen Dr. Prince, in his institution, use this method in a very bad case of contraction after a severe burn. I have tried the sponge grafts after burns and other injuries as soon as granulation begun, and have been pleased with the result.

But one more case: a man fell off a railroad train, receiving several bruises and tore almost the whole skin off his left hand, dorsal side. With the loss of the skin, the tendons of the extensors were exposed. Knowing the result that would follow by the contraction of the wounds during the healing process, I first thought of dressing with the carbolized oil sponge, but changed my mind, cleaned the wound well, stopped all bleeding, and at once grafted the wound over with the sponge graft, covered with a piece of antiseptic gauze. After five or six days I looked at the wound; no suppuration; granulation had already commenced; those pieces of grafts that were loose I cut off and replaced by new ones; kept on that way till the wound was healed, and obtained by this process a broad and pretty firm cicatrix; of course I kept the hand flexed all the time.

Previous to my employing the sponge grafts, I was very fond of skin grafting in all its forms, by shifting, plastic method, by transplantation, by very small grafts, and by very large grafts, with more or less satisfactory results, but it is tedious sometimes. Now I am fond of sponge grafting, for the results obtained are so gratifying.

The main advantage that I have observed with sponge grafts in flesh wounds is, "the prevention of contraction." This may be due only to the mechanical influence; in what other way it may act towards securing the beneficial effect produced I cannot tell. Perhaps the antiseptic influence of the iodoform has something to do with it.

But do not understand me to say that one can heal all sore legs or wounds alike with the sponge graft; in some cases the mechanical with a simple hygienic treatment suffices; in others the constitution has to be attended to according to circumstances. But so much is sure, it is worth while for every practitioner to give it a trial. I believe that sponge grafting can take the place of skin grafting in most cases, and may be advantageously employed in addition to plastic surgery.

If I have not given you anything new, nevertheless I hope I have drawn your attention to something useful.

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Dry Salicylic Acid as a Surgical Dressing.—In the *Texas Courier-Record of Medicine*, October, 1883, Dr. E. L. Stroud, of Fort Worth, Texas, describes a case of Hey's operation, performed by Dr. F. E. Daniel of that place, in which article, after giving the details of the amputation, he calls particular attention to the subsequent dressing of the stump, as follows:

"But it was not of the operation I intended to write, for there was nothing unusual about the operation within itself. It was the method of dressing and after treatment which excited my admiration and interest, and which prompts this report. The use of dry salicylic acid as an antiseptic surgical dressing, originated with Dr. Daniel. He first used it in 1879, and in 1880 he reported cases treated in that manner, to the Mississippi Medical Association in convention at Vicksburg. He claimed to have first pointed out to the profession that salicylic acid when used dry on a cut or abraded surface, after the first stinging sensation which it produces, possesses decided analgesiant properties: and held that a solution of salicylate of sodium, the method generally employed heretofore, or indeed any solution, or water in any way, was wrong, and opposed to the fundamental principles of antiseptic surgery, asserting that, in his opinion, the water is a medium by which is introduced the very element which is sought to be avoided, to-wit: the septic germs—micro-organism, bacteria, or whatever else is thought to render wounds unhealthy, and to produce septicæmia.

If this surmise be true, it surely is a wondeful advance in the art of surgery. Be it true or not, from that day he says he has discarded the use of water in toto, in dressing wounds, and he assures me of most gratifying results. This case was dressed after this method, which for simplicity, at least, is superior to any I ever saw, and the result, all that could be desired. After closing the stump, all moisture was carefully wiped away, and the cut surfaces after being carefully coapted were thickly covered with dry salicylic acid; a compress applied dry, and a roller bandage moderately tight was passed around the stump. Of course the ligatures were left pendant from the lowest portion of the wound, and proper drainage provided for.

On the sixth day from the operation the bandage was removed, and a fresh supply of the acid applied; the first put on having formed a pasty coating which filled accurately all the crevices, excluding the air, and thus acting as a "scab." None of this was disturbed. In four days more the dressing was again removed, and more acid dusted on; and again,

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for the last time, it was dressed on the 13th, when the patient was dismissed. Sutures and ligatures were removed at the first and second dressings; and during the thirteen days, by which time union by first intention had taken place throughout, there was not the least fœtor, not the least pain, no sign of inflammation, and, except from the opening for the ligature, not a drop of pus; nor was there any constitutional disturbance; neither fever, pain nor headache; patient dismissed in two weeks with a good, sound, serviceable stump.

In the way of surgical dressing what more could be desired? Salicylic acid is all that it is claimed to be, as a deodorant, and disinfectant. In addition to those admirable properties, when used by this method, it is also a local anæsthetic; it is clean, light, and easily applied. It is an absorbent of all moisture; and finally, it is the simplest dressing ever used or proposed. Why, I ask, should we resort to the spray, or use the complicated, heavy, sometimes expensive details of the Listerian dressing, when perfect results are obtained by a method as simple as it is perfect? Dr. Daniel assures me he has dressed stumps after the removal of the finger or toe, or other small wounds, in this manner, and has not had occasion to remove the original wrappings till the parts were soundly healed; and that during the time pain and suppuration were conspicuously absent."

Naphthol.—Its Medicinal Uses and Value.—In the course of a very valuable article on the above subject by Dr. John V. Shoemaker, read before the Philadelphia County Medical Society, October 17, 1883, and published in *The Cincinnati Lancet and Clinic*, Nov. 17, 1883, he says:

Naphthol is one of the remedies of recent introduction, and of the two products of that β naphthol is the one which was first used by Prof. Kaposi as a substitute for the tar preparations in skin diseases. It was thought by him as the essential and curative ingredient of tar, while it was free from the objectional feature of the latter.

My attention was directed to this remedial agent by Dr. Justus Wolff, a chemist largely interested in the manufacture of coal-tar products, who kindly furnished me a paper on the chemistry of this substance, along with some novel properties which he had observed in it. As this paper, however, is too long for reproduction here in its entirety, and besides it is largely of chemical interest only, I will here give it briefly in abstract as far as will be necessary to acquaint us with the chemical character of the subject, as follows:

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Naphthol is a derivative of naphthalene, a hydrocarbon found in large quantities in coal-tar, belonging to the so-called aromatic group. In the fractional distillation of coal-tar, various hydrocarbons are obtained at different degrees of heat. Thus at 80° C., benzol distils over; between 80° and 110° C., benzol and toluol mixed; at 111° C., toluol alone; from 111° to 136°, toluol and the different xylens mixed; from 136° C. to 142° C., xylens only; then the cumenes, phenol and cresols; and at 218° C., naphthalene, which sublimes in colorless, transparent, brilliant, crystaline plates, possessed of a disagreeable pungent odor; the empyric formula of which is $C_{10}H_8$.

Naphthol is produced from this by a substitution of one of the hydrogens in naphthalene by one molecule of hydroxyl =OH.

According to the different positions of the hydrogen, substituted in the naphthalene by the hydroxyl, two different naphthols are obtained, of which one is called α naphthol, and the other, the one we shall alone speak of hereafter, is the β naphthol of the formula $C_{10}H_7OH$.

The β naphthol crystallizes in scale-like clinorhomboidic lamina from watery solutions, whilst in a molten state it represents clinorhomboidic prisms. It dissolves in 520 parts of water at 60° F., and in 75 parts of boiling water. It is readily soluble in alcohol, ether and chloroform. An aqueous solution is colored yellow by chloride of lime, and by heating this solution yellow flakes separate. It melts at 122° C. (Schaefler), but a mixture of both α and β, naphthol melts at a lower temperature than either alone. Compounds with alkaline metals or ammonia and alkaline earths are not stable, and separate easily, either by evaporation or in contact with carbonic acid.

The naphthols stand in the same relation to naphthalene as phenol to benzol and cresols to toluol. If one of the six hydrogens in benzol is substituted by hydroxyl, phenol is obtained; in the same way are cresols and naphthols formed. By this analogy of constitution of naphthols, phenol and cresols, the inference may easily be arrived at, that they may prove alike in their disinfectant character as well, and in order to prove this I undertook a series of experiments. Of course the commercial naphthol for that purpose was out of question, and I experimented, therefore, first to obtain a naphthol free from odor. As the crude article contains, as contaminations, sulphur and sulphurous acid, the sublimates thereof will yield, besides the naphthol crystals, also sulphur-

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reted hydrogen, thionaphtholes, carbolic and cresylic acid, thiophenols and the like, to which ordinary naphthol owes its pungent and disagreeable odor. I avoided this all by passing a rapid current of steam through its aqueous solution, expelling thus all volatile by-products, and obtained naphthol thus in its greatest state of purity, in beautiful silver crystaline scales, as here submitted. This naphthol may again be sublimed and obtained then in elegant white crystals as here shown, but by the heat employed more or less decomposition again takes place and renders the product somewhat odorous and pungent.

In order to test the disinfectant and antiseptic properties of my inodorous naphthol, I added one part thereof in powder form to 480 parts of urine, which at the expiration of six months, at a varying summer temperature, manifests no odor or signs of decomposition, while another of the same urine without addition of naphthol had a strong putrid odor already, after standing for three days only. To this latter I added, after standing thus for eight days, some of my inodorous powdered naphthol in the above-mentioned proportion, and in twenty-eight hours it had lost its putrid odor and has kept thus up to the present writing, when no putrefaction or signs of it can be detected in either specimen. The same experience I have made with meat immersed in a solution of naphthol in 520 parts of water, as well as in other experiments similarly conducted.

Experiments with solutions of the compounds of naphthols with alkalies or alkaline earths prove that these act very much less antiseptically than the solutions of pure naphthol soaps, containing four to ten per cent. of free naphthol, which were found excellent and serviceable in removing odors of putrefaction or decomposition from hands or cloths. They are also very efficacious in destroying clothes- or body-lice, as naphthol is a very active parasiticide. If naphthol is evaporated by means of heat, the air in rooms contaminated in consequence of disease or otherwise, will be found to be rapidily deodorized and rendered fresh and sweet without other odors, making it thus of the greatest value for sick-rooms, hospital wards, dissecting rooms, etc.

As carbolic acid has many disadvantages, and is not the deodorant or antiseptic *par excellence*, the inodorous naphthol can certainly take its place in every respect. As naphthol has been described variously as poisonous and injurious to the animal economy, which by its composition and analogy was not apparent, I felt it my duty to experiment with it in

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regard to such, and commenced at once, without hesitation, by taking it internally; one part dissolved in 3,000 parts of water produced at first heart-burn, a slight sensation in the right lumbar region, and some dizziness. Of that solution an equivalent amount was taken to represent a half-grain.

These symptoms disappeared after continuing its use for some days, and while the urine showed upon analysis traces of naphthol and naphthol compounds, no albumen or blood could be detected therein. The doses then were gradually increased to four grains per day for six days, and still no untoward symptoms were discovered, while the warmth in the stomach directly after taking, was followed by increased appetite. Dr. Schofield, of Albany, reports to me that upon my solicitation he has used it largely, at first experimentally in the Albany hospital, where it has now become a staple article, and is used almost entirely to the exclusion of other disinfectants and antiseptics. They use it there for all kinds of disinfection in wards, sick-rooms, for wounds, etc., and have abandoned carbolic acid in all but a few cases, and always with the greatest satisfaction and success. This from the paper of Dr. Wolff.

His experience, as well as that of Kaposi and others, led me, some eight or nine months ago, to employ it both in private and hospital practice, and the success attained with it soon led me to further experiments. I found it to fully sustain the claim that Kaposi had made for it in scabies, psoriasis and chromophytosis, as well as in some of the chronic forms of eczema, in which it not only allayed the itching attendant thereto, but lessened the infiltration as well. In wounds and indolent ulcers I have found it a most useful detergent and deodorant, removing the fetor and establishing healthy action of the parts. Aqueous solutions, containing half grain to the ounce, I have used to great advantage as vaginal injections, especially in leucorrhœa and uterine carcinoma, as well as in gonorrhœal affections, both in male and female. In diphtheritic throat affections it made a most useful gargle, as well as to remove the fetor of catarrhal and other affections of the buccal cavity. Its greatest value, however, arose from its disinfectant action of the evacuations of fever patients and rooms containing them, while by its absence of odor it did not tend to produce inconvenience both to patient and attendants. Combined with powdered talcum or starch, or both, and dusted into the shoes or stockings of those affected with fetid exhalations of the feet, it acts most satisfactorily, and its effects are equally as good in

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the same affection involving the hands, axillary and inguinal regions. Combined with other ointments in the proportion of from one to ten grains to the ounce, it not alone preserves the unguent from decomposition, but exercises also an antiseptic action to the parts and the exudation therefrom. A slight admixture to an experimental sample of lard has preserved the same in excellent condition throughout the hot summer months. In chronic psoriasis, particularly when there is great infiltration, a five to fifteen per cent. ointment has frequently been attended with good results. It has also been very effective in squamous and fissured eczema, used in combination with lard or gelatin.

To test for myself its antiseptic properties in comparison to that of carbolic acid, I mixed the whites of two eggs with equal weight of water, and took one-half of this mixture in one vial, adding one grain of crystallized carbolic acid, while to the other half in another vial I added one grain of Dr. Wolff's odorless naphthol. After the expiration of five days, the carbolized albumen assumed a putrid odor, whereas the naphtholized part, though discolored by the naphthol, remains to this day, twenty days after the experiment, without odor. A quantity (about half-pound) of meat already commencing to putrefy, was also at the same date immersed in a saturated aqueous solution of naphthol, with the effect of arresting the putrefaction and preserving it for some time.

After using naphthol so long and successfully without untoward occurrence, I read to my astonishment and alarm that Dr. A. Neisser, in *Centralblatt für die Medizinischen Wissenschaften*, 1881, No. 30, reported most extraordinary toxic effects obtained with naphthol, and that also Kaposi reported having seen hæmaturia, ischuria, vomiting, unconsciousness, and eclamptic attacks in a boy after the external application of naphthol; also Squire reports, in the *British Medical Journal*, January 14th, 1882, that it produces blisters and irritates the skin.

Dr. Piffard regards it as a dangerous remedy, and Prof. Rapon, while he reports good results with it (*British Medical Journal*) in scabies, prurigo, and eczema, advises in prolonged cases simple ointment to be substituted every fourth week, to avoid any possible risk of absorption.

Dr. Neisser stated that one gramme of a saturated solution (which, in water, would contain abóut $\frac{1}{30}$ grain of naphthol), injected hypodermically in a dog produced hæmaglobinuria, and shortly afterwards death.

To verify these accounts and satisfy myself of the toxic

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effect of pure naphthol, if any it possessed, I administered to one rabbit, repeatedly in twenty-four hours, thirty-four minims of a saturated aqueous solution, hypodermically, without any result, either to inconvenience the animal, increase his temperature, diminish his appetite, or cause lethal effect. This method of treatment was pursued for five days—not less than four to five injections being made per day, and the result was still the same. Determined to obtain toxic effects with it, and, if possible, to demonstrate its toxic action by a post-mortem examination, another rabbit was fed, at first, every three hours with one-grain pills of naphthol, and subsequently with two and four-grain pills, at the same intervals; but, beyond increasing the appetite of the animal, no special effects were apparent. In consideration of this, one of my assistants, Dr. Charles S. Means, and my student, Mr. F. C. Waterman, volunteered to take naphthol themselves internally, to test, if possible, its action upon the human organism. They commenced with one quarter of a grain dose every two hours—their pulse, temperature and urine being subjected to the closest inspection both before and after. The second day they took a half grain every two hours; the third, one grain every three hours; the same on the fourth; while on the fifth and sixth they took two grains every three hours, and on the seventh five grains twice daily. The pulse and temperature did not appear to be affected by this, nor was at any time albumen or blood apparent in the urine. Though they experienced great warmth in the epigastric region after each dose, that passed away in a short time, but left them with slight vertigo, buzzing of the ears, with all evidence of cerebral hyperæmia. The alvine evacuations were softened and of mushy consistence, changed to a clay color, and in one of the cases increased to diarrhœa.

Arriving at a *resumé* of my experiments, I must certainly proclaim the odorless naphthol which I had received from Dr. Wolff as not a toxic agent; and while I found it a most useful remedial substance, and a disinfectant and antiseptic of the greatest value, it does not, in my experience, confirm the dangerous influence exercised on the human organism as reported by the gentlemen above quoted; a fact for which I can only account by the greater purity of the material used by me—purified from deleterious contaminations. That it is far superior to carbolic acid and other disinfectants and antiseptics I have no doubt, and I am informed that in the price it is not alone cheaper than the former, but, by its greater efficacy and smaller amount necessary, it is certainly

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more advantageous, aside from its greatest recommedation of being almost absolutely odorless. It must be borne in mind that all my remarks apply to odorless naphthol—only such as I have exhibited—and that I consider that alone as safe for medicinal use.

Note on Paraldehyde as a Hypnotic.—(By F. C. Wilson, M. D., of Philadelphia, Pa., in *The Polyclinic*, December 15, 1883.) Paraldehyde has during the past year been made the subject of occasional contributions from various sources. Its introduction as a drug is due to the Italians, and especially to Cervello, of Palerma, and Morselli, of Turin. It is, above 50° F., a colorless liquid, of a specific gravity of .998, boiling at above 225° F., and soluble in about eight parts of water at 52° F.

Chemically, the aldehydes are bodies obtained by limited oxidation of alcohols, from each molecule of which two atoms of hydrogen are eliminated with the production of water, thus:

(Ethylic Alcohol.) (Acetic Aldehyde.)
$$C_2H_6O + O = C_2H_4O + H_2O$$

By further oxidation acids are produced, and these correspond in composition with the alcohols whence they are derived, thus:

(Acetic Aldehyde.) (Acetic Acid.)
$$C_2H_4O + O = C_2H_4O_2$$

In the presence of nascent hydrogen, however, aldehydes again take up their lost atoms of hydrogen and become alcohols.

Paraldehyde is formed by the action of certain acids, *e. g.* sulphuric, hydrochloric, sulphurous, etc., on acetic aldehyde at the ordinary temperature; it is a crystalline body below 50° F., and is a polymer of acetic aldehyde; that is, its percentage composition is similar, but its molecule is a multiple of that substance, viz:

(Acetic Aldehyde.) (Paraldehyde.)
$$C_2H_4O : C_6H_{12}O_3$$

I am indebted for information concerning this substance to the *Medical News* (July 28th, and October 20th, 1883), to Dr. C. L. Dana's communication in a recent number of the *Medical Record*, and to Mr. Genois, of Messrs. Wyeth & Bro., from whom the specimens I have used were obtained.

The medicinal dose is from thirty minims to two fluid-drachms. I have found a drachm to be the average dose for an adult, under ordinary circumstances. It is to most patients disagreeable and must be administered with a consid-

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erable draught of water. The taste and odor are ethereal and penetrating. Patients complain of this taste several hours after taking it, and it may be recognized by its odor in the breath. It is probably eliminated, unchanged, by way of the lungs.

Paraldehyde acts upon the cerebral hemisphere, inducing rather speedy drowsiness without preliminary excitement. "A lethal dose suspends the functions of the medulla and the respiratory centre, and the action of the heart ceases after respiration." One observer (Brown) noted a slight depressant effect upon the heart in a single instance. It is stated that neither nausea, depression, headache, constipation, nor any unpleasant after effects have followed its administration. Several of my own cases complained of the disagreeable after-taste already alluded to, and one or two of nausea.

Dr. Dana gave a pup six months old a gramme by the mouth. "The animal was at first much excited, running around and stumbling as if intoxicated. It showed no signs of pain or gastric disturbance. Its intelligence was not greatly disturbed; it came when called. The pulse ran up from 130 to 200; the respiration was 20 to 24 and labored. In about twenty minutes it lay down and went to sleep; the pulse was 140; respiration slower (18), and inspiration labored. The animal was easily roused, walked around, then went to sleep again and slept about two hours." Cervello has recently demonstrated a direct antagonism between paraldehyde and strychnia, the former diminishing the reflex excitability of the gray matter of the medulla oblongata, whilst strychnia, increases it.

Paraldehyde has been prescribed as a hypnotic by the Italian physicians, who have found it especially serviceable in the sleeplessness of dementia paralytica, hysteria, and in other forms of disorder of the nervous system.

Dana employed it in a number of cases, in doses not exceeding three grammes. In six cases it acted well as a hypnotic; in two it was helpful; in one it failed. Temporary relief of pain followed its administration in sciatica, and supra-orbital neuralgia.

I have prescribed it in nine cases, as a pure hypnotic. In one hysterical patient it acted well for a short time, but lost its effects, and was discontinued. In a patient who could not sleep, after having acquired the habit of watching an invalid at night, it procured prompt and refreshing sleep. In a lady, rendered sleepless by a sudden and appalling bereavement, it caused sleep, but was abandoned on account

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of nausea, which followed its administration. A gentleman, who had sleeplessness and great mental depression, after a debauch, and who failed to sleep for several nights after reasonable doses of the bromides and chloral, took a drachm of paraldehyde, slept seven hours, and awoke refreshed. On the next day, this patient, being disturbed after he had taken it, failed to sleep, but succeeded on taking a second dose. The other cases were sleeplessness from ordinary causes, and were all more or less fully relieved. It appears to speedily require an increase of the dose.

If I may venture to express a personal view, it is that paraldehyde will prove a useful addition to our sleep-inducing drugs, but will supersede neither chloral, which it resembles in its effects, nor any others among them.

It is, like new products of the chemical laboratory, at present expensive. There is no reason why a demand for it should not cheapen it.

I thank Dr. O. Horwitz, resident physician in the Jefferson Hospital, for assistance in observing such of the cases as were treated in that institution.

Discussion on Paraldehyde.—Dr. Bartholow said: "I have had some experience with this remedy, and I think Dr. Wilson's judgment of it is well founded. It will not take the place of chloral, because it is not so certain in its action. It does not, however, depress the heart, and its action is not extended to the medulla, unless large doses are taken. We cannot accept unreservedly the statements of the Italian physicians. We cannot forget the claims which Prof. Polli made for the sulphites. As far as my own experience goes, I have found the remedy not to produce excitement, except in a single case. In another case it failed to produce sleep when pain existed. It has, therefore, a limited value. In those cases in which the difficulty is simply an inability to go to sleep and no active cause of sleeplessness exist, the drug is applicable.

Dr. Wilson said: Of these cases, the one in which paraldehyde appeared to have the best and promptest hypnotic effect, was an individual in whom the conditions closely corresponding to the state described by Dr. Bartholow existed. This man was prevented from sleep by the mental state of remorse and chagrin which supervened upon his recovery from a disgraceful debauch. Other hypnotics in reasonable doses had failed.

Simple Operation for Facial Neuralgia.—(By J. F. Heustis,

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A. M., M. D., Professor of Surgery in the Medical College of Alabama. *Medical News*, Dec. 8, 1883.) A. E. L., an old gentleman, past seventy, of fine constitution and very healthy in every respect, except being a sufferer from tic douloureux, has consulted me several times in the last year for his complaint, and has taken the various remedies likely to benefit him, with very little relief. As he continued to suffer more and more, I advised him to let me operate on him as the only means of relief. But the neuralgia being general, affecting the branches of both the supra-and infra orbital nerves, I could not promise him with entire confidence that an operation on the infra-orbital nerve only would be sufficient, although that seemed to be most affected. The pains would dart all over the side of the head and face at the least touch, even of a hair of the head or beard, or from the impression of a breath of air, or even from the movement of the jaws in mastication. His suffering became so great and constant, and the neuralgic attacks so severe from attempts to eat, that he began to run down from sheer exhaustion from want of food and pain.

He was so weak at the time of operation, that it was a very important matter at his advanced age to make the operation as simple as possible, consistently with the hope of permanent relief. Therefore, discarding Carnochan's operation of trephining the antrum and following up the nerve beneath the orbit and removing it; and Langenbeck's slighter one, of dividing the nerve far back in the orbit with a tenotome and drawing it out through the infra-orbital foramen, I merely cut down upon the infra-orbital foramen, and with a fine steel drill, such as dentists use, improvised of piano-wire, drilled out the nerve in its entire length, as far back as the sphenomaxillary fissure. The immediate effect of the operation was to abolish all sensation in the previously sensitive parts, and to enable him to use his jaws without suffering the darting pains he formerly had. And not only was the sensitiveness of the face relieved, but also that of the head, showing that the trouble was in the distribution of the infra-orbital nerve, and that the affection of the branches of the supra-orbital was a reflex one. Barring some swelling of the face, he had no trouble afterwards. The wound soon healed, and he has been able to expose himself to the air, and to eat with impunity, and now, although nearly two months have elapsed, he remains free from pain and is enjoying excellent health.

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Book Notices, &c.

Practical Clinical Lessons on Syphilis and the Genito-Urinary Diseases. By FESSENDEN N. OTIS., M. D., Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, New York; Surgeon to Charity Hospital, etc. New York: Bermingham & Co. 8vo. Pp. 584. Price, $4.50. (From Publishers.)

For a number years during the author's professorship in the College of Physicians and Surgeons, it has been his practice to distribute to his students small pamphlets entitled "Class-room Lessons," embodying the more important principles in the study of syphilis and genito-urinary diseases, believing with truth that such means were the best adapted to prevent inattention, or misconstruction of the language of the lecturer, on the part of the student. From these printed pages has grown this exceptionally valuable treatise, and in justice to the talented author, his views on the subject treated deserve more detailed mention than our space allows.

To Dr. Olis more than to any other one investigator is due the present rational belief as regards the origin and progress of the syphilitic disease. Up to as recent a period in the past as 1868, authorities had not been able to reconcile the different theories of syphilitic infection, and it was not until the author had advanced his theory of its nature, based not so much upon any one new discovery, but upon a careful cosideration of the different physiological and pathological processes of the disease, that a scientific explanation of the various manifestations of syphilis had been presented. He claims, in brief, that the abraded surface required for the initial lesion heals without acute ulcerative action—in this differing from Chancroid—and that at the point of entrance or development of cellular and fibro-plastic material takes places in the tissue, thus producing the perceptible characteristic induration. This exudation consists of lymbhoid or germinal cells accumulated and proliferated *in loco*, and it makes its way to the blood current at the sub-clavian vein, the lymphatic vessels and glands. Wherever found, this morbid secretion is characterized by the presence of microscopic masses of plotoplasm or germinal matter holding the contagious properties of the poison, and the excessive localized proliferation of cell elements constitutes a marked feature in every stage of syphilis. This doctrine of excessive proliferation, now generally acknowledged to be correct, ex-

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plains philosophically the curative action of mercury, which drug, until recently, has been empirically used. There is probably no one remedy which has the power of inducing fatty metamorphosis to the same extent, and as the essential factor of syphilis is an accumulation of superfluous cell material, we are naturally warranted, on rational grounds, in expecting the best possible results from the employment of mercurial treatment.

In the author's remarks upon chancroid, he points out in the plainest manner the difference between it and the disease of syphilis, showing that while the latter is characterized by excessive accumulation of tissue-building cells, the former, from its inception to its cicatrization, is a process of necrosis—in the fullest sense of the words, death of tissue,—so that the two diseases are "in relation to each other as *life* to *death*—each the highest type of its own peculiar action."

Like other authors of the present day, he recognizes the fact that gonorrhœa—though acquired chiefly through contact in the venereal act—is frequently the result of non-specific inflammation, and he finds no ground of belief in a specific gonorrhœal *micrococcus*. He would limit the use of the word "gonorrhœa" to that form of urethral inflammation due to contact with a pre-existing gonorrhœa, using the term "urethritis" to denote that which arises from innocent causes. He believes that the so-called abortive treatment of the disease does not abort true gonorrhœa, the cases where it is successful being those of a simple urethritis, which would have disappered in a few days without treatment of any kind. He doubts if medication ever limits the duration of a true attack, although a number of the usual symptoms may be alleviated by such means, and he has found, after a careful study of many cases which ran their course without medical treatment, that the time elapsing before recovery was the same as in those which had undergone active remedial measures. He closes his remarks upon this disease by announcing as his positive conviction and belief, based on long and careful experience, that "any urethral discharge which gets well within four weeks, under any sort of treatment, never was a true gonorrhœa." His only form of specific treatment, based on his long clinical experience, after rest, cleanliness, etc., is frequent soaking of the inflamed organ in water as hot as it can be borne, and he believes that by this means he restores his patient to health with as little pain and discomfort as is possible, doing away with all so-called specific medicines and injections. The chapters on the se-

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quelæ of gonorrhœa are as full and complete as could possibly be required, and are replete with practical advice, those treating on gleet being especially worthy of study.

As stricture is the usual causation of gleet, the author's urethra-metre, invented in 1874, by means of which the slightest deviation from the normal calibre of the utrethra may be discovered and determined, is one of the most valuable instruments in genito-urinary surgery; and if Dr. Otis had no other claim on the profession than that given by this invention, he would still be regarded as a modern benefactor. The treatise contains a detailed description of this valuable means of diagnosis, with illustrations, and its clinical employment is fully explained.

In common with many other writers, Dr. Otis finds fault with the number of urethral scales of diameter now in use, there being at least five different ones at present commonly employed in this country, and it is often impossible to know which a surgeon has used, when he reports the calibre of a urethra, and he presents excellent reasons why the metric system of urethral measurements in circumference, now in use in France, should be universally adopted by American practitioners.

He says, happily, that "gleet" is the signal which nature hangs out to notify the patient and his surgeon that the urethra is strictured at some point, and affirms as a positive axiom, "that the slightest encroachment upon the calibre of the urethral canal is sufficient to perpetuate a urethral discharge, or even, under favoring conditions, to establish it *de novo* without venereal contact."

He takes issue with the older authorities who have taught that strictures were not absolutely cured by dilatation and incision, and presents case after case where radical cure has followed the use of his peculiar dilating urethrotome; and in his personal experience of over nine hundred operations, he has not only never had a death or a permanent disability of any sort, but has never performed the operation with the instrument mentioned, either to his own regret, or without marked or acknowledged benefit to the person operated upon. He claims as one of the reasons why dilating urethrotomy has proven so successful and free from dangerous sequelæ, that, contrary to the statements of many authorities, the greatest proportion of strictures requiring operative treatment are situated in the penile urethra, and are found in less frequency the further the distance from the meatus urinarius. The reason for the error he believes to

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have been made, is, because too much stress was laid by these observers on proof given by post-mortem appearences, no use having been made of the urethrometer on the living subject.

Another point the author makes, is that his clinical experience goes to show that the majority of writers are mistaken in teaching that the main point of differential diagnosis between organic, and spasmodic stricture of the urethra or urethrismus, is that the latter is always temporary or transitory in its character. He shows from case records that reflex urethral stricture may be of long continuance, and in such instances has been frequently mistaken for true stricture.

In referring to the late report of Sir Henry Thompson before the Royal Medical and Chirurgical Society of London, on digital exploration of the bladder, by means of an incision through the perineum as an aid to diagnosis, in which the operation is called "a new method of investigating obscure diseases of the bladder," he shows that the method is not by any means new in this country, having been performed here at least ten years previous to the time of the English surgeon's mention of it as a novelty; and he sums up the discussion of this subject by stating his full belief that while the risks of the operation of exploratory perineal urethrotomy are identical in theory and practice with median lithotomy, the operation is of great practical value, and a justifiable one under proper circumstances.

Although Dr. Otis very forcibly enunciates his own views on each branch of the subjects treated, yet he is not at all dogmatic, but on the contrary presents with all fairness the theories and practice of other recognized authorities, and endeavors to do the fullest justice to other laborers in the same field. He naturally feels that his opinions concerning pathology and treatment—based upon an extended clinical experience of nearly twenty years—deserve careful consideration, and we think no reader of this volume can fail to recognize that his views are well taken, and that he deserves great praise for the careful investigation and clearing up of some of the doubtful points in genito-urinary surgery. We can recommend this work, not only to the physician who seeks to make a specialty of the treatment of venereal diseases, but also to the general practitioner, with the statement of our full belief that no more practical and valuable treatise on the subject has been presented to the profession for many years. Every doctor who desires to acquaint himself with the latest information on genito-urinary diseases should possess this book.

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The Treatment of Wounds, its Principles and Practice, General and Special. By LEWIS S. PILCHER, A. M., M. D., Member of the New York Surgical Society. With One Hundred and Sixteen Wood Engravings. New York: Wm. Wood & Co. 1883. 8vo. Pp. 391.

This, the August volume of Wood's Library of Standard Medical Authors, deals exclusively with a branch of surgery which is of the greatest importance to the general practitioner, and supplies a place which a more general work on surgery would fail to do. The earlier chapters, referring to the physiology of repair, and the influences capable of disturbing such repair, present the results of the latest study on the subject, and are written in a plain and readable style. The general practice of wound-treatment is thoroughly discussed, and every mode used at the present time, which is or promises to be of any value, is carefully described. Part II. of the work is devoted to Special Wounds, and an examination of the nine chapters included in this part, shows how completely the author has covered the subject. Every variety of wound known is presented in detail, with the special treatment required for each, full reference being made to the best authorities. The book is one to be not only read carefully on purchase, but to be placed at hand for ready consultation.

Insanity Considered in Medico-Legal Relations. By T. J. BUCKHAM, A. M., M. D. Philadelphia: J. B. Lippincott & Co. 1883. 8 vo. Pp. 265. (For sale by West, Johnston & Co., Richmond, Va.)

The chief objects in view in the preparation of this valuable little volume have been to plainly place before the reader "the pernicious uncertainty of verdicts in insanity trials," hoping to more fully attract attention to this monstrous evil, by such means beginning the removal of some of the more objectionable features of medical jurisprudence; to point out carefully the main causes which have produced that uncertainty; and to faithfully criticise the system which has made insanity trials a reproach to courts, lawyers and the medical profession. The conclusions arrived at by-standard writers on the medico-legal aspects of insanity are fully given with proper references; and the book being intended not only for the medical, but also for the legal profession, technicalities have been as far as possible avoided. In the course of the work the author gives fully the "physical media" theory of insanity, which he strongly believes to be the true one; the somatic theory; and the "intermediate"

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theory, which attributes to the body and soul alike, originative influence in the growth of mental disease. He does not consider it worth while to discuss the "psychological" theory, as the day of belief in insanity being strictly an organic intellectuat lesion has fairly passed away. The chapter on "Experts" is a severely critical consideration of the present expert system as witnessed in our courts of law, and the author points out with the utmost clearness on what a ridiculously insecure foundation the reputation of a general practitioner as an "expert" rests. He calls for an entirely different system of procuring medical expert testimony in trials where the question of insanity is raised, and suggests a method for the purpose, which if adopted would certainly redound to the benefit both of the profession and the public. In the appendix a number of opinions rendered by eminent judges in the course of insanity trials are given, and the index is particularly complete. The work is of value, not only to the physician and lawyer, but also to any non-professional man interested in the subject of which it treats.

A Practical Treatise on Materia Medica and Therapeutics. By ROBERTS BARTHOLOW, M. A., M. D., LL. D. Professor of Materia Medica and General Therapeutics in the Jefferson Medical College of Philadelphia, etc. Fifth Edition. Revised and Enlarged. New York: D. Appleson & Co. 1884. 8 vo. Pp. 738. (For sale by West, Johnston & Co., Richmond, Va.)

We very favorably noticed the fourth edition of this valuable work when it appeared in 1881, and after a carful examination of the present volume we can add to our former notice only words of praise. It seemed complete then, but the sixth decennial revision of the United States Pharmacopœia which has recently appeared necessitated the adaptation of the work to the changed officinal standard. The opportunity thus afforded of revision, allowed the author to rewrite, change and add new matter where necessary, and the result is one of the best treatises on the subject ever published.

As in the earlier editions, the utmost care has been taken to give as far as possible the physiological action of remedies, that being, without doubt, the true basis of nearly all real progress in therapeutical science; but the author has not been at all unmindful of the truths learned from properly conducted clinical observations, believing that, though physiological research has done and is doing the greatest amount of good in the study of therapy, yet empirical facts

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of undoubted value are occasionally brought forward. Dr. Bartholow has earned the right to be called an authority on Materia Medica and Therapeutics, as he has not only given special thought to that study during thirty years of clinical experience, but has for years ranked as one of the best teachers of that branch of medicine in America. He supplies on our side of the water much the same place which Fothergill holds in the esteem of the English profession.

The scheme of classification of remedial agents in the treatise under consideration is the same as that of previous editions, and is as practical and free from defects as such a classification can well be. It will probably never be possible to make a perfect one. The clinical index adds much to its value for hasty reference, and taken altogether it is a book which should be found in the library of every practitioner, as its practical utility is beyond question.

Practical Pathology. A Manual for Students and Practitioners. By G. SIMS WOODHEAD, M. D., F. R. C. P., E., etc. With one hundred and thirty-six colored plates. 8vo. Pp. xv—484. Edinburgh: Young J Pentland. 1883. (Through P. Blakiston, Son & Co., Phila. Cloth, $8.00.)

This manual, as the author modestly calls his beautiful work, was prepared, we presume, for use in the laboratory of the University of Edinburgh, under his especial care. Though it may have been written for this purpose, it is so replete with information as to the technique of preparing and examining tissues, and so fully and beautifully illustrative of the appearances of diseased tissues that it will be regarded as a treasure by any one desirous of extending his pathological information; and the better acquainted the purchaser is with pathology, and microscopy, the more he will be delighted with it.

The plan adopted is to follow the tissue from the body to the microscope, to describe the method of making the *post-mortem* and naked eye examinations, and of preparing the various structures for the microscopic examination. The first chapter, therefore, very naturally and properly is devoted to the post-mortem examination, being based upon Vichow's well-known system, the whole occupying 20 pages.

The second chapter is devoted to a description of the apparatus used in studying pathological histology, passing on to the multiple processes for the examination of tissues in the fresh and prepared state, with full and explicit directions

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for hardening, staining, and preserving them—55 pages being devoted to this subject.

These chapters we regard as of the utmost importance as giving a completeness of detail, the knowledge of which is absolutely necessary for the student of pathology.

With the third chapter commences the study of the various organs and tissues in their diseased conditions. They are treated of separately, a chapter being devoted to each, a short account of the normal structure preceding the consideration of the abnormal condition.

It would be impossible to go into detail in noticing this excellent book, without giving a very extended review. Of the illustrations, too much could scarcely be said. For beauty, color and faithfulness of detail it were scarcely possible to improve them, and with such drawings the book could not be gotten out in America for twice the money. Unlike most British books it is well bound. A very thorough Index completes the work. W. G. E.

A Complete Handbook of Treatment. Arranged as an Alphabetical Index of Diseases to Facilitate Reference, and containing nearly One Thousand Formulæ. By WILLIAM AITKEN, M. D., (Edin.), F. R. S., Professor of Pathology in the Army Medical School; Examiner in Medicine for the Military Medical Services of the Queen, etc. New York: Bermingham & Co. 1882. 12mo. Pp. 444. Cloth. Price, $2.00. (From Publishers.)

This little volume is composed of the chapters on Treatment taken from the seventh and latest edition of Dr. Aitken's Encyclopædic work on the Science and Practice of Medicine, the chapters having been thoroughly revised and re-arranged, so that the matter contained therein has been made much more available for reference. The endeavor has been made to have the work both concise and comprehensive, and is arranged to the end that the practitioner having a case of disease to treat, may have before him in the most compact compass, the latest treatment advised by the best authorities. The treatment of every recognized disease is here given in the plainest possible manner, and the busy doctor, having made sure of his diagnosis, can from this book give his patient the treatment prescribed by the leading physicians of the world. There is no attempt made to present theories, but only facts which can be transformed into working force, and Dr. Aitken's name is sufficient guarantee that such facts are presented in a form readily comprehensible to the most hurried reader.

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Editorial.

Associate Editor and Proprietor of Virginia Medical Monthly.

On January 1st, 1884, Dr. Wm. H. Coggeshall, of this city, by purchase, will become half owner and full Associate Editor of this journal. He has been intimately connected with this office for many months, and has had full opportunities to examine the books and business relationships of the journal sufficiently to satisfy himself that he is making a safe investment. He has rendered us enough of editorial service, in *every* department of the journal, to satisfy us that he is eminently capable. Indeed, as an employed Assistant for some time past, both by his advisory counsel, and his untiring energy, when work was to be accomplished, we have learned to depend upon him. The present Editor, therefore, in parting with one-half of his full rights and responsibilities, after nearly ten years of sole proprietorship and editorial labor, feels that he is not sacrificing any of the interests of the patrons of the *Medical Monthly*. On the contrary, with his knowledge of the Associate he has made, he confidently expects the journal to widen even its present wide field of circulation and influence.

Dr. Coggeshall is not unknown to medical journalists nor to medical journal readers. Contributions from his pen have been generally sought by medical journals, and so modest has he been in regard to claims for their consideration that he has often been surprised to find synopses or commendatory remarks made of them in other journals. His close observation of medical literature and accurate record of authorities quoted in support of views maintained render him specially valuable in the field of journalism. In prompt and proper attention to business matters he is thoroughly trained. Such is the gentleman we have made our Associate, and to whom we will introduce our readers, beginning with the January number, 1884.

The *Medical Monthly* has become sufficiently well established to be known to most of the readers of medical journals—especially of the Southern and Southwestern States.

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With the combined effort of the two Editors and Proprietors, it is confidently to be hoped that a much larger number of subscribers will be added during the ensuing year, and that matters of broader interest to the profession at large will hereafter be more generally discussed. Heretofore, this Journal has been considered too much the mere organ of the Medical Society of Virginia. While the new management will not lessen any of its interests in the discussion of medical questions relating to this and adjoining States, it also promises to discuss more fully matters of general professional importance to the practitioners of remote sections. In other words, every effort will be made to keep fully "abreast with the times."

We are promised the continued services of Dr. Wm. C. Dabney, of Charlottesville, Va., whose pen has contributed so many able articles of original investigations as to make his name an authority, and his writings of interest and profit to all who read them. As we impartially review the notes made by translators for other journals, we must confess that had we the whole corps of earnest students and distinguished medical scholars of this country from which to select, we would prefer him to any other. We find pleasure in having this opportunity to make this slight acknowledgment to one who has been so instrumental in assisting us to establish the *Medical Monthly*.

After the January No., 1884, this journal will be issued regularly during the first week of each month. Hence we must ask all correspondents to be punctual in forwarding their communications as early in the preceding month as possible.

All communications relating, either to the editorial or business departments of this journal, should hereafter be addressed either *Virginia Medical Monthly*, Richmond, Va., or Drs. Edwards & Coggeshall, Richmond, Va.

The Medical Record Visiting List for 1884.—We take pleasure in noticing this valuable little pocket companion. A visiting list of some kind, which can be conveniently carried on the person, has become a necessity to the busy practitioner, and of the various kinds we have so far used, that

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issued by the house of Wm. Wood & Co., is decidedly the best in many respects. The printed matter in this list comprises all that is likely to be referred to in a hurry, and the quality of the paper used for the blank pages is exceptionally good. The list is substantially bound in seal skin, with flap, pencil, pocket, etc., and can be procured either at any book store, or by direct application to the publishers, at $1.25, with blanks for thirty patients a week, or $1.50, with blanks for double that number.

State Anatomy Act.—On November 28th, a meeting of the medical profession of Richmond was called, at the Retreat for the Sick, to consult as to the feasibility of bringing before the Legislature an Act to legalize dissection. At that meeting two forms were presented, one which closely followed the present law in Pennsylvania, and the other a much shorter and simpler form devised by Dr. McCaw. After some consideration a committee of five was appointed to examine both forms, and to prepare from them a bill for presentation before the Legislature, such bill to be reported in full at a called meeting of the Richmond profession, Monday evening, Dec. 3d, 1883. On that date, at the rooms of the Academy of Medicine, a number of the best physicians of the city were in attendance, and the committee recommended the form of bill passed last winter by the Pennsylvania Legislature, with such local and other changes as were required for this State. The bill as presented was adopted by the meeting, and a committee was appointed with Dr. F. D. Cunningham, chairman, composed mainly of members from the faculty of both medical schools of the State, to carry out the best means adapted for its passage through the present Legislature, and its inclusion in the State Code.

The main features of the bill are, that a Board of Control, to consist of members of the faculties of the Medical College of Virginia, and the Medical Department of the University of Virginia, shall be established, and that such Board shall have power to send for the body of any person in the State, which after death shall remain unclaimed for twenty-four hours, the local officer in charge of the body notifying said Board of the fact. These bodies are to be divided between the two institutions named, for the purposes of dissection only, and after they have been supplied, if any unclaimed body is reported to the Board, it may be applied for by any practitioner in the State for the same purpose. No body is to be sold, or taken out of the limits of the State, and all

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desecration of grave yards is prohibited, under severe penalties. The remains after dissection, must be properly buried by the parties in charge, and all expenses of transportation, etc., are to be borne by the institution or individual to whom the Board awards the body.

This bill, thus hastily summarized, seems to meet both needs; the robbing of graves is put an end to, and means of dissection are placed in the hands of medical students in the State. At present, the contrary condition obtains; grave robbing is going on to a greater or less extent all the time, and the law unqualifiedly prohibits the student from the study of practical anatomy.

The committee having the matter in charge will address every physician in the State, enclosing proposed bill, and urging all to put forth every effort to influence their legislators favorably regarding it. As strong an influence as possible will be brought to bear upon the members here, and although the work of the Legislature this session is even of greater extent than usual, yet it is sanguinely hoped that it will not adjourn next spring without passing this most needed bill.

The New Surgeon-General.—After a longer delay than is usual in such cases, the President has appointed Dr. Robert Murray to the highest position in the Medical Service of the United States Army; and as Dr. Murray was the oldest colonel in that service, and in direct line of promotion, besides being eminently qualified for the position, there can be no question of the fitness of the appointment.

The profession generally were hoping that Dr. Billings might receive the place, and Dr. Baxter's name was prominently mentioned; but whatever might have been our individual preferences, we join the congratulations that the post left vacant by the sudden decease of General Crane, has been so worthily filled.

Dr. Murray is a native of Maryland, and as he is over sixty-one years of age, can hold the position but little more than two years. He entered the service as Asst. Surgeon in 1846, and has served continuously since then, reaching his present high position by slow but well deserved steps of promotion. During and subsequently to the civil war he has held the responsible positions of Medical Purveyor and Director of different Departments and Divisions, serving mainly in the West until 1882, since which time he has been stationed at Governor's Island, New York Harbor. The vacancy in the

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office of Assistant Surgeon General, created by this appointment will be filled by Colonel Charles Sutherland, Surgeon, U. S. A., who is in the immediate line of promotion.

An Act to Regulate the Practice of Medicine and Surgery.—The following is a copy of the bill now before the Virginia Legislature and favorably reported back to the house for action: *Be it enacted by the General Assembly of Virginia*:

1. There shall be for this State a Board of Medical Examiners, consisting of one member from each Congressional district in the State, and two from the State at large, whose term of office shall be four years, or until their successors are appointed and qualified. The term of office of the Board first appointed shall commence on the first day of January, 1885.

2. The said Board shall consist of men learned in Medicine and Surgery, and shall be appointed by the Governor on the first day of November, 1884, and every fourth year thereafter, from a list of names to be recommended by the Medical Society of Virginia. Vacancies occurring in such Board for unexpired terms, shall be filled in the same manner. Such recommendations shall be by the votes of a majority present at some meeting of the said Society, and the same shall be certified to the Governor by the President and Secretary of such meeting. Provided, however, that in case such Society fail to make such recommendations prior to the time of appointment, or if the Governor shall, in any case, consider the persons so recommended, or any of them, unsuitable, then he shall appoint such Board, either in whole or in part, without regard to such recommendations. If any of said examiners shall cease to reside in the district for which he was appointed, it shall vacate his office.

3. The members of said Board of Medical Examiners shall qualify and take the usual oath of office before the county or corporation court of the county or corporation in which they shall respectively reside. The officers of said Board shall be a President, Vice President and Secretary, (who shall also act as Treasurer)—such officers to be members of and elected by said Board. The first meeting of the same shall be at Richmond, and such time as the Governor shall notify the members by mail to assemble. Subsequent regular meetings shall be at such times and places as the Board may prescribe, and special meetings may be had upon the call of the President and two members; but there shall not be less than one regular meeting per annum. Five members

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of said Board shall be a quorum; said Board may organize at its first meeting, and may, at its first or any subsequent meeting, prescribe rules, regulations and by-laws for its proceedings and government, and for the examination of candidates for the practice of medicine and surgery by its individual members.

4. It shall be the duty of said Board, at any of its meetings, and of the individual members of said Board, at any time, to examine all persons making application to them who shall desire to commence the practice of medicine or surgery in this State. When the examination is by an individual member of the Board, he shall report the result of the same to the President thereof; and when an applicant shall have passed an examination satisfactory as to proficiency before three individual members of said Board, or before the Board in session, the President thereof shall grant to such applicant certificate to that effect. A fee to be prescribed by said Board, but not to exceed ten dollars, shall be paid to said Board (through such officers or members as it may designate) by each applicant before such examination is had. In case any applicant shall fail to pass a satisfactory examination before the Board or before the three individual members to whom he shall first apply, he shall not be permitted to stand any further examination within the next three months thereafter, nor until he shall have again paid the fee prescribed as aforesaid; provided, however, no applicant shall be rejected upon his examination on account of his adherence to any particular school of medicine or system of practice, nor on account of his views as to the method of treatment and cure of diseases.

5. The fund realized from the fees aforesaid shall be applied by the Board towards its expenses, including a reasonable compensation to the President and Secretary.

6. Any person who shall obtain a certificate as aforesaid from the President of said Board, shall cause his name to be registered in the Clerk's office of the County or Corporation Court for the county or corporation in which he shall reside; and it shall be the duty of said clerk to register the name of every such person presenting such certificate together with the date thereof and the name of the President of the Board, signing the same in a book kept for the purpose as a part of the records of his court, which shall also give the date of each registration, and his fee for each registration shall be one dollar, to be paid by the person whose name is registered.

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7. No person who shall commence the practice of medicine or surgery after the first day of January, 1885, shall practice as a physician or surgeon for compensation without having first obtained a certificate and caused his name to be registered as aforesaid. Any person violating the provisions of this section shall pay a fine of not less than fifty nor more than five hundred dollars for each offence, and shall be debarred from receiving any compensation for service rendered as such physician or surgeon.

8. Any person who shall have been assessed with a license tax as a physician or surgeon by any Commissioner of the Revenue in this State at any time prior to the first day of January, 1885, shall be taken as having commenced the practice of medicine or surgery prior to that date; but any person who shall not have been so assessed shall be taken as not having commenced such practice prior to that date.

9. Any physician or surgeon who shall commence to practice after the first day of January, 1885, and who shall reside in an adjoining State within ten miles of the boundary line of this State, shall be entitled to stand the examinations and receive the certificate herein-before provided for; and such certificate shall be registered as herein-before provided, in that county in this State which is nearest his place of residence; and such certificate and registration shall make it lawful for him to practice medicine and surgery.

10. Nothing in this act shall be taken as including or affecting in any way the practice of dentistry, nor shall it include physicians or surgeons residing in other States and called in consultation in a special case with a physician or surgeon residing in this State; nor shall it be construed as affecting or changing in any way the laws in reference to the license tax to be paid by physicians, surgeons and dentists.

Maryland State Sanitary Convention.—This Convention held its sessions November 27 and 28, and was extremely well attended by physicians and others interested in sanitary science. The *Maryland Medical Journal* says of it that it " may be regarded as a decided success, from which beneficial influence must sooner or later be felt."

American Public Health Association.—At the late meeting of this society, held at Detroit, Nov. 13, to 17, 1883, Dr. Albert L. Gihon, of the United States Navy, was elected President, and Dr. James E. Reeves, of West Virginia, 1st Vice-President, for the coming year.

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The International Review of Medical and Surgical Technics, is the name of a new medical journal, to be issued June 1st, 1884, in Boston, Mass. The chief Editor is Dr. J. H. Warren, and from our personal acquaintance with the doctor, we predict an enterprising and successful publication. The field to be covered is a new one, and the journal will supply a want long felt by the profession.

Curious Occupation for a Doctor.—The daily papers have lately reported a strange instance of a physician's downfall, occurring in Pennsylvania, the details of which are as follows. Dr. James C. Buck, of Braddocks, was a rising young practitioner, with a practice of over $3,000 per year, but desiring to increase his income joined what was called the Gordon gang of highwaymen, and acted as their "stool pigeon," decoying persons who were supposed to have well filled pocket-books, into unfrequented places, where other members of the gang were lying in wait. The doctor was a very gentlemanly appearing man, and his prepossessing manners and plausible address enabled him to act his part to perfection. He was found guilty upon trial, and the unhappy man was sentenced to imprisonment for the term of five and a half years in the penitentiary.

The Fidelity Mutual Life Association has an advertisement in this number, to which we invite the especial attention of our subscribers. The Association proposes to extend its field of operations throughout the South and Southwest, and will need a medical examiner at each point where an agency may be established. The statement that the Editor has a policy in the Association in itself manifests his confidence in it, and hence he urges it upon the attention of his readers.

Attempted Murder of a Physician.—As Dr. Rochard, a prominent physician of Paris, was quietly walking along the streets of that city recently, he was assaulted from behind by a stranger, who shot him in the back with a pistol. The man proved to be a lunatic, imbued with the common morbid belief that he was persecuted. The doctor is recovering, with the ball still lodged in the lung tissue.

Tongaline.—This new remedy, employed so successfully in neuralgia and rheumatism, is rapidly coming into general

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use by the profession. Those who have employed it in either of the above conditions of disease speak highly of its medicinal qualities, and although our own experience with it has been limited to only a few instances, yet what we have seen of its action has convinced us of its great value in certain cases.

Philadelphia Medical Students.—The local newspapers give accounts of some little class trouble at Jefferson Medical College lately. It seems that the juniors took possession of seats in the lecture room, to which the senior students believed they had the best right. After petitions and counter-petitions to the Faculty on the subject, a juncture of the opposing parties occurred, and with the gas turned out, an interesting *mêlée* took place, which resulted in a few traumatic nasal hæmorrhages. The next day when the class assembled for lectures, the row was renewed with increased vigor, and a separation of some of the combatants was required before balmy peace was restored. *The Medical Record* suggests that some of the more pacific sections of the National Code of Ethics should have been read to these violators of order.

A Bust of the Late Dr. J. Marion Sims, made by Dubois, of Paris, was lately presented to the Woman's Hospital, of New York city, on the occasion of the twenty-ninth anniversary of that grand institution which he founded, and for the establishment of which he gave the best years of his life. No stately monument erected over his remains can so fitly tell of the unshrinking purpose, broad humanity, and noble abnegation of self, that characterized the lamented Sims, as can the Woman's Hospital of New York. It is a great source of pleasure to his friends, to know that his merits are so well appreciated there.

New Jersey Sanitary Association.—The ninth annual meeting of this body takes place on December 6 and 7, at Trenton, N. J., in the Senate Chamber of the State House. This Association has during the past eight years presented to the public much valuable information relating to Public and Personal-Hygiene, and has without doubt succeeded in preventing much avoidable disease within the borders of the State. The example set by the sanitarians of New Jersey might well be followed, with the same success, in Virginia.

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Obituary Record.

Dr. James Marion Sims died suddenly at his home, in New York city, about 3 A. M., Tuesday, November 13th, 1883—aged 70 years. Although for some years past his health had failed him, still he rallied sufficiently to lead him to expect to see his ninetieth year. On the day before his death, he remarked that he had not felt so well in a year, and he was in the best of spirits. "In the evening of the same day, with his son, Dr. Henry Marion Sims, he attended a patient, and on his return, sat down to write on his autobiography—about one-half of which he had finished. He complained of a little pain over his heart, but continued to write. He retired, but was restless during the night, and shortly before 3 o'clock on Tuesday morning, he turned up the gas, and wrote for a time in bed. A little later, his wife noticed that he was breathing in a peculiar manner, and hastened to call his son. When Dr. Henry Marion Sims reached the bedside, his father gave one short breath, and expired at 3:15 A. M." Thus passed away the loved, honored and immortalized Sims! A greater shock or a severer loss could not have been sustained by the profession—especially as his work was not done.

An autopsy was made by Drs. W. H. Welch and G. L. Peabody. Drs. A. L. Loomis, W. H. Welch, J. A. Wyeth and W. Gill Wylie were also present. The heart was "somewhat enlarged with adherent pericardium. The valves were competent. The calibre of each coronary artery was markedly narrowed by atheroma, which was partly calcareous. In the muscular tissue, at the upper part of the inter-ventricular septum, there was a patch of fibrous myocarditis as large as a silver quarter of a dollar, with the beginning of an aneurismal pouch. There was a similar fibrous myocarditis in the papillary muscle which controlled the anterior segment of the mitral valve. Both ventricles were dilated, and the left hypertrophied. The lungs were slightly congested and œdematous. The parietal and visceral pleura on the left side was everywhere adherent. The kidneys and liver showed lesions of chronic congestion. Brain normal. Some atheroma of the internal carotid arteries."

A biographical sketch of Dr. Sims, prepared by the late

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Mr. Henri I. Stuart, of New York, appeared in the January number, 1877, of the *Virginia Medical Monthly*, which has served a valuable purpose in writing up his record. This sketch was accompanied by a most excellent steel-plate engraving of the subject. In what follows, we are pardonable, at least, in making extracts from that sketch.

Dr. James Marion Sims was born in Lancaster District, South Carolina, January 25th, 1813. He was a descendant of the great Scottish chieftain, Rob Roy McGregor. His education began in the common school of that District, and his academic graduation was from the South Carolina College in 1832. He immediately commenced the study of medicine in the South Carolina Medical College, at Charleston. From this institution, he went to the Jefferson Medical College, of Philadelphia, where he graduated as Doctor of Medicine in 1835.

In 1836, Dr. Sims married Miss Eliza Theresa Jones, of Lancaster, S. C., who survives him. To them were born nine children—five daughters and four sons. Two sons and one daughter are dead. One of his daughters married Dr. Thomas T. Pratt, formerly of Alabama, but now of Paris. His sons are Mr. W. Marion Sims and Dr. Henry M. Sims, of New York city.

About the time of his marriage, in 1836, Dr. Sims located in Montgomery, Ala., where he soon gained reputation as a general practitioner, and in a short while afterwards won prominence as a surgeon—especially in the line of female diseases. In 1846, he announced (in the *American Journal of Medical Sciences*), a new theory as to the nature of trismus nascentium—that it was "a disease of centric origin, depending on a mechanical pressure exerted on the medulla oblongata and its nerves," due, most generally, to "an inward displacement of the occipital bone" at the time of birth. It may be said that this paper was the ground work upon which his reputation began; for while this theory, under the test of observation of subsequent writers, has not proved as generally correct as was then supposed, still its formulation evinced genius in the author, as it also showed him to be an earnest searcher after the truth.

About the time this theory was attracting the study of others, he conceived the idea of curing the then incurable condition—vesico-vaginal fistula; and after a long series of experiments, he described as his method the substitution of the silver wire suture for silk thread, and allowing the wire to become sacculated in the living tissues of the vagina. To

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perform the operation successfully, however, he found it necessary to devise another form of female speculum than the cylindrical. The result of this study led to the well-known "Sims' speculum," without which or some modification of which, no practitioner of to-day would attempt vaginal or uterine practice. In order that he might perfect his proposed operation, and prove the worthiness of his speculum and other instruments he had invented, he founded a private hospital in Montgomery early in 1846. He supported this institution wholly at his own expense until 1849, when his health failed. In 1851, when his condition was being pronounced hopeless, he prepared his ever memorable paper on the treatment of vesico-vaginal fistula by the plan he had so long studied, which paper he contributed to the January number, 1852, of the *American Journal of Medical Sciences*. In after years, he extended the use of silver and other metallic wire sutures to nearly every class of surgical cases requiring the use of sutures.

In 1853, even before his health was fully restored, Dr. Sims removed to the city of New York. His reputation had preceded his coming. Having devoted so much of his former life to the study and treatment of diseases of women, he there determined to continue to pay special attention to gynæcological subjects. So earnestly did he study diseases of women, so many new plans of treatment for them did he devise, and so bold and yet so curative were his operations that the world of medical men wondered, and studied the reasons of his unprecedented successes. Soon, by common accord, Dr. Sims came to be recognized as the "Father of Modern Gynæcology."

So abundant was the material at hand, and so numerous and urgent were the demands on his special skill, that Dr. Sims saw the necessity for a hospital in New York city for the treatment of women's diseases. Notwithstanding the many discouragements his proposition received, by the exercise of his untiring energy, he persuaded an influential circle of acquaintances as to the necessity for such an institution; and thus he succeeded in organizing the Woman's Hospital, which was opened for patients in 1855. The results exceeded expectations. He consequently planned an institution of a wider range; and, in 1857, secured a special charter for the "Woman's Hospital of the State of New York," with an appropriation, in 1858, of $50,000 from the State, for the erection of a building. The city of New York soon afterwards gave an entire block of ground between 49th

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and 50th streets, and also $10,000 to carry out the plan. In 1860, a design for the new building was adopted, but one not in keeping with Dr. Sims' plan. Hence, in 1861, he went abroad to study hospital architecture. While visiting many hospitals of Dublin, London, Paris, Brussels, and other cities, he performed various operations of his own devising, and with unfailing success. He returned to New York in 1862, and proposed the "pavilion plan," which was adopted. The existence of the War between the States and other circumstances delayed the erection of buildings, so that it was not until 1866 that one of the "pavilions" was ready for the reception of patients. Dr. Thomas Addis Emmet, who had served as Assistant for seven years, at the suggestion of Dr. Sims, who was again in Europe, in 1866, was promoted to Surgeon-in-Chief of the Hospital. A second pavilion was opened in 1876, the combined capacity of the pavilions being 260 beds.

In 1862, Dr. Sims re-visited Europe with his family. But by this time his reputation had become so well established that his professional services were at once fully engaged. This fact decided him to remain in Paris—especially as his children were being educated there. He returned to New York in 1868, intending to remain.

While abroad, the French Government conferred on Dr. Sims the order of "Knight of the Legion of Honor"—especially because of his successful operations for the cure of vesico-vaginal fistulæ. By invitation of Prof. Deroubaix, Surgeon to the King of Belgium, he demonstrated his operations as satisfactorily as he ever did in the Woman's Hospital of New York. "For this he was elected 'Corresponding Fellow of the Imperial Academy of Medicine of Brussels,' and the Belgian Government offered him the 'Order of Leopold, the First;' but the American Minister at the Belgian Court (Mr. Sanford), objected to his receiving it on the ground that Dr. Sims was a Southerner." He, however, received other decorations from the Spanish, Portugese and Italian Governments, and in later life received the Order of Leopold, of which he had formerly been deprived for the reason above mentioned.

In 1870, Dr. Sims again went to Paris to visit his family and bring them home. But while in that city, the Franco-Prussian war commenced. The American Colony in Paris decided to organize an Ambulance Corps. The Committee requested Dr. Sims to command it as Surgeon-in-chief. He at first declined, but Mrs. Sims successfully urged her hus-

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band to accept the appointment, saying "it was a fitting occasion to repay, in some sort, the obligation we all feel for the generous hospitality we have received from the French people." In a few days, the Ambulance Corps was ready. The young men composing it were anxious to go to the front. The Committee opposed it. Dissatisfaction and dissension arose, and Dr. Sims and his staff resigned, and organized themselves into the "Anglo-American Corps," composed of eight Englishmen and eight Americans. Dr. Sims was made Surgeon-in-chief, with Drs. Wm. MacCormac, Frank and Thos. T. Pratt, as assistants. The Corps marched from the Palais de l'Industrie to the depot, a distance of five miles, preceded by ladies bearing the English, American and French flags. "*Vive l'Amerique*," "*Vive l'Angleterre*," "*Vive la France*," was shouted by the dense mass of spectators for the whole distance. Dr. Sims, with his Ambulance, passed through Belgium to Mézieres, which no French Ambulance could have done. He arrived at Sedan just as the great battle had begun, August 31st, 1870; and his Ambulance was assigned to the Cazerne de Asfeldt, which contained nearly 400 beds. Assignments of other members of the Staff were made to other hospitals on the battle field, and thus the Corps rendered surgical service to about 1,000 of the wounded Germans and about 1,600 of the French. Dr. Sims remained at Sedan about a month—until the work of the Ambulance Corps was finished—and then returned home. He was the oldest man who left Paris in charge of an Ambulance. For his services to the Germans, he received the "Iron Cross" and other decorations from the German Government; and by the French Government, he was "created Knight of the Legion of Honor"—a decoration he had already received.

In 1872, Dr. Sims, with his family, returned to his New York city home. His influential consulting and special surgical practice was at once re-established. He continued his active relationship as Visiting Physician to the New York Woman's Hospital, until about December, 1874, when he resigned. After that, he made two extended visits to Europe, always being received with cordial welcome, and honored by the most influential consultation and operative practice that it was possible for any one to secure. Patients flocked to him from all parts of the Continent, and honors and titles poured in from scientific bodies and those in Governmental authority.

There was scarcely an honor in the gift of the American

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profession that Dr. Sims did not receive. He was President of the American Medical Association, President of the American Gynæcological Society, and Honorary Member of many National as well as of most State Medical Societies. In fact, the higher rank of the profession of this country felt they were honoring themselves in their faint bestowal of honors upon the now illustrious dead.

The profession of Virginia is especially to be proud of his favors. In 1875, when the fullness of his greatness was recognized, the world over, he accepted an invitation to attend the session of the Medical Society of Virginia, and delivered a lecture which will never be forgotten by those who heard it, on "Mechanical Treatment of Uterine Diseases." Dr. Sims also paid the Medical Society of Virginia a visit during its session in Alexandria, 1879, where he lectured on "Abscess of the Liver as a Cause of Cerebral Hyperæmia"—a lecture that made a deep impression upon his auditors, as it has done upon the profession generally, since its publication in the "Transactions" for that year.

To the Editor of the *Virginia Medical Monthly*, he was scarcely less than a father. Whether at home or abroad, Dr. Sims, from the commencement of this journal, manifested the deepest interest in its success, although in no way connected with it other than as a subscriber. He contributed to the *Monthly* the important historic medical paper of this age—the "Discovery of Modern Surgical Anæsthesia." By counsel, by contribution of pen, and by persuading friends to subscribe, in this, as also in foreign countries, whenever opportunity offered, he demonstrated his personal friendship more emphatically than merely polite promissory letters could possibly do.

Dr. Sims contributed a few articles to foreign journals. The chief one of modern date was on the "Treatment of the Nausea of Pregnancy by Dilatation of the Os Uteri." To American journals, he was not a frequent contributor; but whatever he published was eagerly sought and read with a sense of instruction. His writings have been almost altogether in the line of surgery—either gynæcological or general. His Centennial Address before the American Medical Association, in Philadelphia, 1876, is one among his most generally important professional papers, and the influences of his suggestions, if they are not already about to revolutionize thought as to professional matters, will sooner or later bring about changes which common sense assures one to be right and just. His papers on the "Microscope in the Sterile Con-

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dition," and on "Intra-Uterine Fibroid Tumors," besides those already referred to in this notice are among his specially valuable contributions. He was also the author of a "Treatise on Ovariotomy," which is still a standard authority; while his "Clinical Notes on Uterine Surgery," is a work now out of print, but sought after by all gynæcologists. This book, at the solicitation of numbers of the profession of this and foreign countries, he had determined to revise, and in fact had more than half re-written it when his health began to fail over two years ago. It was to have been published simultaneously in two or three different languages. For the most part, we have learned, full enough notes are left from which the work may yet be gotten out. Several chapters have been published in some journals. It is to be hoped that his son, Dr. Harry Sims, will set himself at once to work to furnish the profession with the revised edition of the "Clinical Notes on Uterine Surgery." It is a natural suggestion to make, on our part, that Dr. Pratt, of Paris, with whom Dr. Marion Sims was, for many years, intimately associated in practice, would prove a valuable help in completing the revision.

About three years ago, Dr. Sims was afflicted with an acute lung trouble which, it was feared by his able attendants in New York city, might lead to serious chronic disease of the lungs. As soon as it was thought to be safe for him to be sent South, a specially arranged sick couch was fitted up for him on the through train to Charleston; from thence he went to Florida. His health gradually improved, and by the succeeding Spring was sufficiently recovered for him to return home—by way of Louisville, Cincinnati, etc. That summer, he went to Europe again, spending the winter in Rome or Nice, and the remainder of the year in Paris or other sections of France. Although he did not seek nor wish to enter upon practice, his professional advice and attention was everywhere sought. About a couple of months of the autumn he spent in New York. During the fall of 1882, he returned to Europe and divided his time as in the year before. He came back to the United States some months ago, and, on account of his health, purchased ground in Washington, D. C., upon which he intended to build a home in which, upon completion, he expected to live the remaining period of his life. Until the erection of his proposed building, he had determined to live in Europe—mostly in Italy—and was to have sailed the Saturday succeeding the date of his sudden death.

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Outside of his medical learning and genius, Dr. Sims had other talents that made him the centre of attraction, in whatever circle he was placed. Having himself felt, in years gone by, the need of funds and friends, when he came to possess both, he was neither stinted as to the disposal of the one, nor unkind to the friendless. While ever ready to accord the due mead of merit and praise that might belong to others, he was always anxious to elevate those who were on the lower rounds of the ladder of scientific proficiency. The same kind of effort he made to advance his own worth to the profession and to humanity he tried to inspire in others to make for themselves. His geniality of temper and earnestness of manner could not fail to win friendships. None knew him but to love him. The love of children, the affection of women, the gratitude of men and the honors of nations, were all spontaneously showered upon him. He was without ostentation in his private relationships to society, and yet knew well all the courtesies due in court life. He was fond of literature, and read much, as was evinced by the ever pleasing and persuasive language he used in conversation as also in public addresses. In the line of romance, it is announced that he has left a sparkling sketch entitled "Lydia McKay and Colonel Tarleton," which will appear in the February number, 1884, of *Harper's Magazine*.

The funeral ceremonies took place at 10 A. M., November 16th, in the Madison Square Presbyterian Church, New York city, of which Dr. Sims was one of the oldest pewholders.

The name of Marion Sims will ever remain a central figure in the galaxy of great original thinkers of the profession. His benefactions to the human race have placed his memory in the list of such men as Harvey, Jenner and Simpson. In the highest sense may it be added of the great Sims:

> "His life was gentle; and the elements
> So mix'd in him, that Nature might stand up
> And say to all the world:—'*This was a man!*'"

Dr. Charles William Siemens, known the world over as one of the first and most practical electricians of our time, died in London, from rupture of the heart, on Nov. 20th, 1883, aged 63 years. Previous to securing his reputation as an electrician, he had gained considerable fame as an engineer and scientist. He was a Prussian by birth.

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Original Communications.

ART. I.—**On the Relationship Existing Between the Opium Habit and a General Neurotic Temperament.** By EDWARD C. MANN, M. D. Physician to Sunnyside, a Private Hospital for Nervous and Mental Disease, Inebriety and the Opium Habit. Brooklyn, N. Y.

As a student of nervous diseases, I have come to recognize a fact taught me by my personal experience. Hereditary neurosis is an important antecedent of the opium habit in at least a very large number of instances. This connection of the opium habit with the neurotic tendency I have never seen alluded to in any literature on the subject.

An opium habitue in the higher class of society, although he or she may purposely withhold the information from the physician, will be found to be one of a chain of variously neurotic members of a family stock. In a very large number of instances, I have traced either a neurotic or a phthisical family history in every case. I have often found ancestors eccentric to the verge of insanity, while neuralgias, gout, epilepsy, insanity and phthisis have been so frequent as to make me a firm believer in the neurotic disposition inherited by opium patients. I have taken pains to reject the statements of every case in which my informant was not intelligent enough to give a reliable account. I do not intend

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to convey the idea that there are any definite anatomical changes of nerve tissue; but as we know less about the nature and conditions of the centric nervous system in the opium habit than of most other diseases; and as the sufferers from it are increasing rapidly, any definite information which can be added to the subject seem to be valuables.

My information has been derived entirely from private patients belonging to the more highly educated class, and reticence has been the great obstacle in my way. Many of my patients themselves previous to contracting the opium habit, had exhibited in their earlier history the essential nervous phenomena of many of the neuroses. Migraine, hay fever, sciatica, ovarian and uterine neuralgia, gastralgia, cardiac neuralgia, neurotic angina pectoris, have all been found in their history, existing anteriorly to the taking of morphine at all, and frequently *not* the direct cause of the attending physician administering a hypodermic. My experience would tend to show that in a given case, where an individual has exhibited in his history the essential psychic signs of a neuropathic constitution, let a few hypodermics of morphia be given to relieve the pain of any disease, and the morphia craving is almost certain to make its appearance and the opium habit to become well developed, so that the habitue is only capable of discharging his duties and occupation by the artificial and temporary health imparted by opium. A large operator in grain informs me that he never can trust his mental operations in large speculations unless he has had his usual hypodermic. A surgeon of note, who applied to me for treatment, could not operate without his usual dose of morphine to overcome the muscular relaxation which came on as soon as the effect of the morphine was gone. All suffer from the languor, lassitude, loathing of food, aching of the limbs, gloom and indefinable wretchedness when without morphia.

The difference between two individuals, one of whom has exhibited the psybic symptoms of inadequate nerve nutrition or general functional neurasthenia, and another who has a stable nerve tissue, when morphia has to be given in sickness, is immense. The latter bears its withdrawal without

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discomfort, while the former who has taken it under precisely the same condition will develop the fearful irresistible craving for morphia which it is very difficult to eradicate, and from which a voluntary renunciation is unknown.

The essential psychic signs of this neuropathic constitution are those closely allied to all central neuroses, or rather to the early stages of them. The formation of the opium habit in those inheriting this constitution, is the expression of a morbid condition of the whole centric nervous system, having its basis in defective nutrition. There is both mental and physical atony in these cases. The nervous system in these cases is congenitally weak and imperfect, lowered in power of vital resistance and very irritable. It is easily thrown into that state of psychical commotion which eminently favors the development of the opium habit.

I would insist, therefore, on the fact that the majority of cases of the opium habit, in the middle and higher classes, have, as a great pathological cause, certain conditions of the central nervous system which indisputably are inherent from birth. Sudden emotional shock or harrassing work and anxiety are often the exciting causes of the opium habit in such persons—the neurotic inheritance being the predisposing cause. There are thousands of neurotic subjects, born of families that have shown strong tendencies to insanity, epilepsy and paralysis, who are exposed to the danger of becoming victims to the opium habit every time that it is given hypodermically to relieve sick headache or neuralgia, as it so often is.

Practitioners would do wisely to take heed as to what kind of a nervous system their patients have, before commencing to treat hyperæsthetic pains, due to an increase in the excitability of the sensory apparatus, by hypodermics of morphia, as the effects of the morphia habit in that mental region where the emotions and the organic nervous system come into closest relations are simply damning. If, instead of treating all pain with morphia, the sexual irregularities, the defects of nutrition, hostile psychical influences, over fatigue of the special senses, cramming in modern education, insufficient sleep and bad atmosphere—all of which tend to

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the production of pain, were duly antagonized, there would be fewer cases of opium habit.

The essential signs of the general functional neurophatic constitution of which I have spoken are, general malaise, impaired nutrition and assimilation, muscular atonicity, neuralgia, mental depression and sleeplessness. Profuse perspiration, loss of normal elasticity of the skin, periods of mental inactivity alternating with hyper-activity of the mental functions, and physical and mental prostration may also be noticed. There are relaxation of the general muscular tone, cardiac stimulation and palpitation, inability of the cerebral cognizant centres, evinced by fright at slight causes, and innumerable fears of different kinds extending to the performance of muscular actions, cerebral actions and glandular functions; added to these, there are muscular twitchings, a hasty, imperfect utterance and a quick agitated manner. There may be pains referred to parts not diseased, due to transference of the nerve force or vascular disturbance of nerve centres. There may be diffuse hyperæsthesia due to this vascular disturbance of nerve centres. There is defective functional action of viscera due to reflex action. The heart, the spinal cord and the brain all functionate abnormally in the neurasthenic constitution.

All the forms of fear of which I have spoken are the psychic signs of debility of brain, due to general failure of the normal nutrition appropriating power of the brain. Morbid fears and dread, morbidly colored perceptions, conceptions and misconceptions, timidity, irresolution, irritability of manner and speech are all foreign to a healthy person, and are the psychic signs of the neuropathic condition of opium habitues. There is both mental and nervous instability and irritability—the symptoms of inadequate nerve nutrition. There may be also morbid and groundless suspicion, hallucination and delusions—all abnormal and not found in health. The psychical timidity and indecision of mind and manner are very characteristic in some cases. With all these facts in view, I would strongly insist on the relationship between the opium habit and a general neurotic temperament.

The following interesting case of opium habit in the per-

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son of an intelligent physician who recently placed himself under our care, is appended.

He was 40 years of age and a native of Germany. He gave the following account of himself:—

Seven years ago I first commenced to use morphine. I contracted the habit by taking it internally in doses of one-sixth of a grain thrice daily for the relief of gastralgia. I gradually increased this dose until two years after I commenced its use, I was taking fifteen grains of morphine per day. Without my usual dose I felt very weak in my limbs, a sensation of nausea, a sort of congestion of the head, dryness of the skin, a miserable feeling—worse than pain—in the calves of my legs; the mental processes were not well conducted. With my usual doses, my intellectual processes were quickly performed, and I worked quickly and with alacrity. At the end of two years I found myself a complete slave to morphine. I was utterly incapacitated for work without my morphine. I now commenced to use morphine hypodermically, reducing the dose. I am not sure how much I reduced it, but I think from fifteen grains to eight or ten grains; I still felt very miserable and continued to do so for four or five years, when hearing of a Western institution I went there. I was promised a cure in forty days. Stayed four weeks. I was given atropine and quinine, but in what doses I do not know. I received no benefit, except that I reduced from fifteen grains to ten grains and went home. After going home I lost money and children, and suffered much mental distress. I next took some medicine, sent me by a regular physician, which affected my eyes, causing complete amaurosis for two days, after which my sight returned. It also had a narcotic effect and it made me nearly crazy. I received no benefit from this whatever.

I now felt desperate. I went to Europe, to Berlin, putting myself under the care of an eminent physician there. I now lost another child and my wife temporarily lost her reason, and had to enter an asylum, so that I had to return to America, instead of having any treatment in Berlin. I now tried an experiment. I had read that a sea trip was good for the morphine habit. I accordingly took a trip from New York to Hamburgh. I found that I could reduce my doses slightly (two or three grains) while at sea. But when I got home I increased my dose. I went again to the institution in the West and stayed twenty days, but received no benefit. I now commenced to take alcohol in small doses—

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whiskey being my chief stimulant. At first the whiskey helped me very much and stopped the vomiting and made me feel stronger. While taking whiskey I could take less morphine than without. At one time, I took for a short time, as high as thirty grains of morphine, but soon reduced. I continued stimulants and morphine. I now had another child born to me and felt much happier. I took less and less morphine and more whiskey. Could now attend to my practice night and day with very little trouble. Ten weeks ago I lost this child. Intense mental excitement now set in, I used more and more morphine and whiskey, and my eyes began to trouble me. Suffered from amblyopia and double vision. Could not sleep. I had hallucinations of sight and hearing. I now commenced to use belladonna in small doses, to try to antidote the opium. I reduced morphia to four grains daily. I took a grain of extract of belladonna for each day for about three weeks, and continued alcohol. I now had a consultation with a Western physician about my eyes. All agreed that it was reflex from brain condition and curable, being produced by tobacco, alcohol and morphine. They advised no local treatment, but advised treatment for the opium habit and alcoholism. I now came to New York. I went to an oculist; was having severe intra-ocular neuralgia and pain in the occipital region of the head. The oculist examined my eyes and said that I had "toxic amblyopia (alcohol, tobacco and opium) with a retinal hemorrhage. Some opacity of right lens. Eye condition curable as there is not yet any atrophy of optic nerves."

Upon admission to our private hospital for nervous diseases and opium habit, the Doctor gave the history of utter sleeplessness for one week. He had three meals in eight days, and had not eaten half an ounce of meat in three months. He had no appetite at all—in fact he loathed food. He was very tremulous on admission and felt as if delirium were coming on. Eye suffused, and tendency to mania. Ordered a mixture of chloral, sodium, bromide and gelsemin—fifteen grains of chloral, thirty grains of sodium bromide and five minium fluid extract of gelsemin. Tongue furred. For the past three weeks he has had wandering lightning pains. No other ataxic symptom. Patellar tendon reflex partially diminished. Other reflexes normal. These lightning pains, of course suggest the possibility of the invasion of posterior spinal sclerosis. Has taken already three injections=1½ grains of morphine.

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April 1st. Had an epileptic attack and acknowledges to having had attacks for thirteen years, the first having occurred in New York, in the spring time. The exciting cause was a sudden fright—the predisposing cause probably being syphilis, as epilepsy occurring after twenty years of age is generally, if not always, due to syphilis affecting the central nervous system. This patient was reduced at once to half his ordinary allowance, and a reduction was made daily until on the seventh day after admission, no morphia at all was taken. Sodium bromide in increasing doses was used for the seven days until at the minimum of morphine, the maximum of sedation was reached. Tincture of iron and quinine were given daily as tonics, and warm baths, digitalis, and sweet spirits of nitre to eluminate the bromide. Subsequently the faradic current of electricity and strychnia were used as tonics.

During the first stages of treatment in these cases in our institution, we use static electricity for the patient while the opium is being withdrawn, the patient being placed on the insulated platform and simply charged with negative electricity. This insulation and electrification has a combined sedative and permanent tonic effect of much value in all forms of nervous disease. In the after stage of treatment, after the morphine is withdrawn, we first insulate the patient and draw sparks from the spine without removing the patient's clothing. This excites the nervous activity, and I have obtained therapeutical effects from statical electricity with the improved Holtz machine, that I failed to get from ordinary galvanism or faradization. This latter application, insulation and sparks, is a stimulant-tonic of great therapeutic value, not in only the opium habit, but in inebriety, neurasthenia, neuralgia and hysteria. I am not aware that either Dr. Morton, of New York, Prof. Schwanda, of Vienna, Dr. Golding Bird and Dr. Wilks, of London, Dr. Vigouroux and Dr. Charcot, of Paris, or Drs. Fromnhold or Clemens, of Germany—all of whom have devoted particular attention to therapeutic effect of statical electricity—have ever drawn attention to the value of this form of electricity in combating the condition of inadequate nerve nutrition in inebriety, and the opium habit, and building up and restoring vitality to the exhausted nervous system. In my institution I have

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found it of positive value in this class of cases. So that I should not willingly relinquish its use. It antagonizes, in connection with nervine tonics, the premature mental decay and nervous exhaustion so often seen in inebriates very perfectly.

481 *Franklin Avenue.*

ART. II.—**Leg and Arm Extension Splints.—(I.) Leg Suspension and Extension Splint.—(II.) Arm Extension Splint*.** By JOHN ST. P. GIBSON, M. D., Staunton, Va.

(I) LEG SUSPENSION AND EXTENSION SPLINT.—I would offer for your consideration a wire suspension and extension splint for fractures of the leg, particularly those implicating the ankle joint. I have used it in a number of cases with entire satisfaction, and I believe with very good results.

In the form I now present it, I have used it for five years; but its inception was in 1859. I was taught to treat fractures by the late Dr. Nathan R. Smith, of Baltimore—I think the greatest surgeon of America—just after he invented his anterior splint. He so filled his pupils with enthusiasm that they believed almost any fracture of the lower extremity could be successfully treated by his splint. This delusion on my part was soon dispelled by an oblique fracture of the leg, near the ankle joint. On inspection, the next day, after applying the apparatus, I found the bones had slipped aside. But as I was wedded to the suspension plan of treatment, I devised an extension attachment which gave a very good result in this case, and the present splint is but the result of a number of modifications of this same idea.

It is made of No. 5 wire, of which take 153 inches and divide into two pieces, of 104 and 49 inches—or, to be sure you have enough, 110 inches and 54. Then take the 110 inches and commencing with the part that goes above the knee, at 2 inches bend to a right angle, then run 34 inches to

*This paper includes the substance of some *ex tempore* remarks made during the session of the Medical Society of Virginia, at Rockbridge Alum Springs, Va., September 6th, 1883. Dr. Gibson illustrated the working of the splints by exhibiting the instruments and "putting up" a case.

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ankle, bend in a line gradually upward, and curving, about 7 inches, then down about 12 inches, then at a right angle 4 inches in the same way back to the commencement, and solder together.

Of the 49 inches of which is formed the counter extension part of the splint, measure 3 inches, then gradually curving upward about 7 inches then downward 12 inches, then at a right angle 5 inches, then backward as above.—$22\times2+5=49$.

The counter extension piece is then soldered to the main splint commencing about 18 inches from the part above the knee. It is then braced by pieces of No. 9 wire, soldered across. All the braces, except the one above the knee, have the wire bent into a ring for suspension cords. The splint, in the straight part, is braced about 2 inches apart; each of the curved parts is braced at the top of the curve about 5 inches apart. In the centre of the foot curve is placed the extension appliance, which is made by soldering about 4 inches from the top of the curve another brace, with a ring in the centre; opposite this ring in the lower part of the foot curve, another ring is soldered; through these rings a piece of No. 5 wire about 12 inches long with a ring turned on the lower end, and after it has passed through the rings a button of solder is put on the upper end to hold it in place.

The splint is applied by first putting on the adhesive plasters for extension. Take a piece of plaster sufficiently large to cover well the bottom of the foot, and on the back of it, two pieces obliquely crossing each other opposite the ankle joint, and long enough to encircle the heel and foot; a piece of bandage 4 or 5 inches long and 3 broad, is sewed opposite the centre of the ankle joint; the whole is then applied to, and bandaged on the foot. Then pieces 3 inches broad, commencing just above the seat of fracture, running above the knee to be attached to either side of the counter extension piece, are put on the sides of the leg.

The limb is then suspended as follows: a piece of stout drilling a yard long and about three-fourths broad, is torn into strips about two inches broad, and extending to within two inches of the middle of the piece, from the foot to the knee; these pieces are then pinned on either side of the

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wire. The cord is tied into the ring at the ankle, and the one near the knee. The splint is then suspended like Smith's anterior splint. The counter extension plasters are then attached to either side of the counter extension curve, and the piece of bandage in the bottom of the foot is attached to the piece of wire in the middle of the extension part—and then extension is made.

(II) Arm Extension Splint.—I would also ask you to consider an extension splint for fractures of the fore-arm.

It is easy to apply—produces no uncomfortable pressure—splints both bones in the semi-supine position, in which the bones are farthest separated, with the idea of securing good rotation. The splint is formed of 49 inches of No. 7 wire. Commencing at the elbow running 12 inches to the wrist, 4 inches for hand, 5 inches for spring, 4 inches across, then back to elbow with 3 inches across:—$21 \times 2 + 4 + 3 = 49$.

The whole length of the splint including spring extension is 19 inches. The length of the splint proper, that to which the bandage is applied, is 16 inches. The 12 inches from the elbow to the wrist is three inches broad, for the hand 4 inches in length, it gradually widens to 4 inches, then 5 inches are curved into a spring.

It is braced at three points: 1st, just above the spring across the hand. 2nd, six inches. 3d, eleven inches. For making extension, on either end of the splint on each side of the ends, rings are soldered through which pass pieces of No. 7 or 8 wire with a ring turned one end, and a button of solder on the other.

The splint, after being bandaged, is applied as follows:—A piece of adhesive plaster $2\frac{1}{2}$ inches broad, is applied over both bones, commencing at seat of fracture, and extending 2 or 3 inches beyond the elbow. Below the fracture, the plaster 3 inches broad runs over the back of the hand, extending 4 inches beyond the metacarpo-phalangeal articulation. To make it hold more firmly, two pieces intersecting each other obliquely pass over the back of the hand. The splint is then bandaged to the arm, and the free ends of plaster attached to the extension wires at either end. Extension is then made.

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Original Translations.

From the French and German. By WM. C. DABNEY, M. D., and S. G. DABNEY, M. D., Charlottesville, Va.

Suture of the Fragments of Bone in Transverse Fracture of the Patella.—This subject has been attracting much attention of late. At the meetings of the Societé de Chirurgié on October 7th and November 4th, 1883, there was a very full discussion of the merits of the operation which was introduced by M. Chauvel, who had been appointed to report on a paper by M. Beauregard, of Havre, on the subject.

M. Chauvel had collected the records of 43 cases, in 38 of which the bone had been broken without solution of continuity of the overlying structures. In one set of cases, the sutures were employed after all other methods had failed; in the other class, they were employed as soon as the injury was received. In 18 cases, two sutures were employed and the substance generally used was silver wire, though occasionally catgut and silk were employed. All the details of the antiseptic method were vigorously carried out.

The results of the operarion were very various; in twelve cases the reaction was violent, while in eight it was moderate. The results were said to have been favorable in seventeen cases; in twelve cases bony union occurred, while in seven it was fibrous; three cases terminated fatally, and in one the thigh was amputated; the result in the other cases is not stated.

M. Chauvel, comparing these results with those obtained by other methods, concludes that the suture may be useful when all other methods of treatment have failed, but it should not be practised as a general thing on account of the dangers incident to it.

M. Lucas-Championniere said that Lister had recently operated on eight cases by the suture method and he had operated on one. The antiseptic treatment was carried out in all its details and the result was favorable in every case. He thought the immediate sutural union of the fragments would become the recognized treatment for transverse fractures of the patella.

M. Pozzi had performed the operation once on a lunatic with success, so far as the bony union was concerned, but the joint was very stiff when motion was first tried and in attempting to move the joint the fracture was reproduced.

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M. Richelot thought the dangers incident to the operation of opening the joint were far too serious to make the operation justifiable except in very exceptional cases, and he called attention to the fact that once, with fibrous union, a very excellent limb often results.

M. Gillette strongly opposed immediate arthrotomy unless there was an external wound.

M. Verneuil protested against the procedure. The results of the "ordinary treatment were far from being bad—the immense majority of patients treated in a hospital being cured and able to walk well—while in the forty-three cases of suture, there were three deaths, one amputation and ten absolute failures. The loss of the use of limb was generally due, not to the want of bony union, but to paralysis of the triceps."

At the meeting of the Societé on November 4th, 1883, M. Larger presented a patient who had twice fractured the patella at an interval of many years. The patient could now walk well though the separation of the fragments was very considerable, but there was no muscular atrophy which he said was "the fatal complement of arthritis."

M. Le Tort stated that he believed in bold surgery when the end to be attained justified the risk; but in the present case there was nothing whatever to justify such temerity.

MM. Despres and Labbé entertained similar opinions.

M. Trelat thought the operation justifiable only after all other modes of treatment had failed.—W. C. D.

Sudden Dislocation in the Course of Acute Articular Rheumatism.—At the meeting of the Societé de Chirurgié on the 31st of October last, M. Verneuil read a paper on this subject. The paper was based on seven unpublished cases, in all of which the dislocation occurred in much the same manner. A young patient was attacked with acute articular rheumatism. The disease, at first poly-articular, gradually became fixed in one or two joints. The bones of one of these joints which had been placed in a bad position, suddenly became dislocated about the tenth or fifteenth day of the disease, and the pain then suddenly ceased. The luxation was easily reduced and the limb was placed and kept in proper position—recovery being only a matter of time. Such is a general picture of all of these cases.

Of the seven cases, five were dislocations of the hip, the other two dislocations of the knee backwards.

"What," asks M. Verneuil, "is the cause of these luxations which are clearly not attributable to lesions of the bones,

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or of the articular structures of the joint?" He does not think that they can be attributed to hydrarthrosis which has usually been assigned as the cause, because he has never been able to diagnose an acute hydrarthrosis at the hip-joint, and there was certainly no accumulation of water in the two cases of dislocation of knee-joints which had come under his observation.

His own view is that the cause is to be found in the muscles of the limb. One group of muscles being paralyzed, as often happens in acute inflammation of the joints, the antagonistic group causes the dislocation which is formed by the faulty position in which the limb is placed; hence the necessity for watching the position in which the limbs are placed in acute articular rheumatism. The reduction of these dislocations is always easy, and they occur just as easily unless such an accident is prevented by appropriate mechanical appliances.

M. Trélat agreed with M. Verneuil as to the danger of allowing the limbs to be placed in a faulty position in acute rheumatism and called attention to the fact that unless the knee was flexed it would be impossible for the flexor muscles to produce a discolation.

M. Reclus said he had met with, and reported five cases of luxations. In all of his cases, they were situated at the hip, but in amyotrophic diseases, such as infantile paralysis (or other amyotrophus,) they had been observed by Charcot and himself at the knee and ankle.

M. Marjolin thought hydrarthrosis might be a favoring cause of such dislocations.—W. C. D.

Asthma—Especially in Relation to Diseases of the Nose.—(A lecture delivered before the meeting of the Vienna Medical Association, May 7th, 1883, by Prof. Jno. Schnitzler.) After a historical introduction, in which the observations of Voltolini, Haenishch, Gottstein, Schæfer, Trænkel, Bresgen, Joal, Hack and others, in regard to asthma in consequence of nasal polypi are briefly considered, the lecturer goes on to give his own experience in these matters, and relates some very instructive cases—among them, cases in which severe asthmatic disease had existed for several years, until the proper recognition of the case led to the cure of the malady; that is, by the removal of the nasal polypi by operation, and in this manner, by the relief of the chronic nasal catarrh, the asthma was completely and permanently relieved. In connection with a detailed account of some cases of his own observation, the speaker described the views on asthma, now

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prevailing and then gave his own opinion, especially as to the relation of nasal diseases to bronchial asthma, in the following propositions: Diseases of the nose are a frequent cause of asthma. Generally polypi, especially mucous polypi, of the nose lead to the disease. But not infrequently a simple chronic nasal catarrh is alone sufficient for the production of severe asthma. This originates, however, not in the narrowing and obstruction of the nasal passages nor yet in the extension of the catarrhal process from the naso-pharyngeal mucous membrane to the bronchial tubes, as is maintained by some authors, but by reflex nervous action—that is, by irritation of the nasal branches of the trigeminus, and sometimes of the olfactory, the vagus is thrown into reflex excitation.

This nerve irritation, then, is the cause of asthma with its well-known symptoms:—Sudden onset, difficult respiration, rapidly becoming very marked and increasing to a paroxyism of suffocation, gradual decline and often the sudden disappearance of the dyspnœa with complete ease, until after a time, which may be weeks or months, the sufferer who thought himself well of the disease is attacked again and hope of full recovery destroyed.

As a rule, an acute catarrh precedes the asthmatic attack proper and frequently the entire attack expends itself in such a catarrh which is accompanied with violent sneezing, a real nasal cramp and a decided watery secretion from the nose. The attacks are very painful and distressing, and may last for several hours, and even, as in some cases observed and minutely described by the lecturer, for several days.

In addition to the distress of the dyspnœa, the fear of impending suffocation is often expressed in the patient's countenance; the face is livid, pale or even cyanosed and often covered with cold sweat; the eyes seem starting from their sockets; the wings in the nose are widely dilated; the muscles of the neck, chest and, later, of the abdomen also, are powerfully contracted; the thorax is spasmodically raised. Accompanying the difficult inspiration and expiration, especially the latter, tubular and sibilant breathing can be heard even at some distance, and nearer the fine and coarse râles from the contracted air tubes. The expectoration, at first tough and tenacious, afterwards becomes abundant and with it the difficulty of breathing gradually declines until as stated above, it often suddenly and completely vanishes; and the patient, who, a few minutes before, seemed hovering between life and death, is as completely well again as if born

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anew. During the asthmatic attack, percussion reveals, generally over the entire chest, a clear, full, over resonant tympanitic sound; at the same time the depression of the diaphragm and the expansion of the lungs cause a diminution of the muffling of the heart sounds. Auscultation shows, as before said, at first whistling and wheezing respiration; later, small, medium and large râles, which may be heard some way off. The muco-purulent expectoration, which is in the beginning tenacious and scanty becomes, towards the end, abundant and fluid and often and by no means always as was formerly maintained, contained substances of peculiar shape, known as Charcot-Leyden crystals, and by many authors declared to be one of the causes of asthma. In this respect, namely, its sudden onset and equally sudden departure, asthma differs materially from labored breathing induced by organic disease of the heart or lungs. Furthermore the rapid change of expression is another proof that in asthma we have to deal, preeminently, with a neurosis. According to the lecturer, asthma consists in a reflex nervous disturbance and that particularly of the vagus.

Irritation of the vagus leads first to spasm of the bronchi and with this, by reflex excitation of the phrenic, spasm of diaphragm is usually associated. Add to this, vaso-motor disturbance in the organs of respiration, namely hyperæmia and increased secretion from the bronchial mucous membrane and the description of asthma given above is complete. All the nerves mentioned are not placed in irritation in every case of asthma, however, nor are all the organs depending on them sympathetically affected; but in one case, vaso-motor disturbance is the chief factor; in the other, the condition of spasm; and hence at one time spasm of the brouchi, at another spasm of the diaphragm is the leading symptom. Thus arise the different theories as to the cause of asthma, of which according to Professor Schnitzler, each one has its claim and which are erroneous only in their exclusiveness, as the lecturer shows by the narration of several notable cases.

The vagus and phrenic, as well as the vaso-motor nerves, can be excited by reflex action from very different organs and thus asthma can arise in the various affections of the lungs and heart, of the organs of digestion and the organs of sex. In like manner, asthma, in consequence of nasal polypi and chronic nasal catarrh, is to be looked on as a reflex neurosis. With the removal of the nasal polypi and the cure of the chronic catarrh, asthma is generally completely

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and permanently relieved. If, however, the disease continues long, the frequent return of the attacks gradually leads to emphysema and dilatation of the heart; and thus, it is evident, not only is the disease increased, but the prognosis as to the possibility of cure becomes unfavorable. In case of a return of the nasal polypi, the asthma also usually appears again in a short time, and this may be considered more certain proof that the disease of the nasal mucous membrane bears a causal relation to asthma.

Nasal polypi are best removed by the cold or by the galvano-caustic loop. Should the first of these means be used, it is advisable to cauterize the mucous membrane with the galvano-cautery in order to prevent, if possible, a relapse. At the same time, the chronic catarrh requires systematic local treatment.

As to the treatment of the asthma itself, Professor Schnitzler has found chloral, by the mouth or the enema, or hypodermics of morphia efficient agents; yet in his opinion the result of even these remedies is by no means so constant as is maintained by some authors. The same is even more true of the other remedies used for asthma. They are generally sufficient in the mild cases and almost always fail in the severe ones.

Within the past year, electro-therapeutics and pneumato-therapeutics have been highly recommended for asthma. From a scientific standpoint, electro-therapeutics would seem of much service; yet practically so far it has availed but little. On the other hand, the experience of the lecturer has been that pneumo-therapeutics is of great practical use in asthma, even although its scientific mode of action is unknown. Especially does the inspiration of condensed air by means of the portable pneumatic apparatus give great relief in the asthmatic paroxysm, however contrary to the prevailing theory; towards the end of the attack, expectoration is promoted and the paroxysm shortened by expiration into rarefied air. When the attack is over, systematic expiration into rarefied air still aids materially in obviating the excessive dilatation of the lungs. Of course, to obtain the therapeutic effects the apparatus must be handled properly and with a view to the end to be secured.—S. G. D.

Tar Beer in Pulmonary Complaint.—Gallons of tar beer are dispensed, with advantage, in the Philadelphia Polyclinic, to patients with chronic laryngeal and laryngo-bronchial affections. It is a good, but almost forgotten remedy.

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Proceedings of Societies.

BALTIMORE ACADEMY OF MEDICINE.

Stated Meeting Held Nov. 6th, 1883.

(Specially Reported for *Virginia Medical Monthly.*)

The Academy was called to order at 9 P. M., by the President, Dr. F. T. Miles. Dr. T. A. Ashby was elected a member of the Society.

Specimens of Fibroid Tumors Removed from the Cavity of the Uterus.—Dr. H. P. C. Wilson exhibited two fibroid tumors which he had removed from the cavity of the uterus. The larger occurred in a patient, aet. 40, who had been bleeding for several years. She was very anæmic and feeble. On examination two subperitoneal fibroids were discovered, and this large tumor was found occupying the cavity of the organ, being attached to the upper part. The os was then thoroughly dilated, and the chain of an ecraseur thrown around the pedicle, which removal was affected without much difficulty. There was some difficulty in getting the chain around the pedicle but this was accomplished by the aid of two dressing forceps.

The smaller tumor was from a woman, aet. 42, and suffering for sometime from profuse hæmorrhage.

Both of these cases had been diagnosticated as change of life had been treated under that view for years. In his experience, most cases of women between 18 and 60, losing blood at irregular times, are referred to change of life and simply because no examination is made.

Specimen of Diphtheritic Membrane Removed from the Vagina.—Dr. Wilson exhibited this specimen which was obtained from a woman aet. 35, very emaciated, anæmic and despondent. She had a long standing pelvic cellulitis and retroversion; the uterus was much enlarged and firmly fixed by adhesions. On examination, the vagina was found to be filled with masses resembling cotton, and which her former attendant had at first mistaken for cotton. A large quantity of these tough-looking masses was raked out, and the physician who had previously attended her said he had found the vagina filled with them at every examination. The mucous membrane beneath—from vulva to os uteri—was fiery-red with papillæ enormously enlarged and manifesting a disposition to bleed. He had used the term because the masses resembled the diphtheritic membrane found in the throat,

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and there was no other term which seemed applicable to them. The patient also had an ecchymosis of the cellular tissue of the eye, which resisted all treatment. He felt certain at the first examination that the masses were wads of cotton.

Dr. J. E. Atkinson thought the term chosen unfortunate. Diphtheria is not a disease lasting for months, nor is the diphtheritic membrane merely deposited on the surface; it involves the membrane and there is always some neurosis. This material is evidently deposited on the mucous membrane. He did think diphtheria could be drawn into question in the case. He was unable to pronounce upon its nature without a microscopic examination; but would suppose it to be of the nature of a fungus aspergillus which fills the external ear.

Dr. Chew asked whether it might not be like the mould formation fibrinous bronchitis and enteritis.

Paradelhyde. Dr. Uhler read a paper upon this agent, his experience of which, as a sedative, had been highly favorable.

Medico-Legal Aspects of Hypertrophy of the Prostrate Gland.—Dr. Christopher Johnson read a paper upon this subject. (See *Maryland Medical Journal, Nov. 17th*, 1883).

Dr. Browne said that in a case of a similar nature which occurred to Dr. Sayre, of New York, the court had insisted upon an examination being made, and the plaintiff was in consequence non-suited.

Analyses, Selections, etc.

Advice to the Medical Witness.—The *Transactions of the Oregon State Medical Society*, 1883, contains an able paper on Forensic Medicine by the President, Dr. C. C. Strong, of Portland, Oregon, from which we condense the following good advice to physicians who may be called upon to give medical testimony in the course of a jury trial. The writer insists first upon the most thorough preparation; that the study of the case should be as complete as possible, as every opposing lawyer has "crammed" for the occasion, and will not fail to take advantage of the slightest slip in the testimony of the witness. It places a medical man in a very unpleasant position who comes into court from a half-performed post mortem examination, satisfied because he has detected

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disease of the heart sufficient to cause death, if he is questioned whether or not there was fracture of the skull; and if subsequent examination or testimony reveals that condition, of which he was ignorant, he loses professional standing which can never be recovered. Completeness of preparation is necessary in all matters affecting public interest, not only for the advancement of justice, but for the vindication of the witness. As an athlete, when called upon to perform some feat of physical strength, prepares his body for the task, so should the physician cultivate his intellectual power when notified of the probability of his being questioned publicly by a lawyer.

Let the preparation be methodical, and if possible, chronologically arrange the facts in the case. Be careful to refresh the memory just before the trial as regards places, dates, names, and times; and when possible in naming a particular day, in the course of the testimony, it is well to give the reasons which impressed it upon the mind.

Consider carefully beforehand size, weight, distances, when these are involved, using invariably their old English standards in mentioning them; and where proximate measure only is required be sure and refer to well known articles. There is nothing impressive, but the contrary, in referring to some professional standard generally unknown to the laity, unless it is necessary to make the testimony clear. If the witness is able to make some kind of a sketch showing the relation of a body, or portion of one, to its surroundings, his words can be much more plainly and definitely understood—but the sketch must be absolutely accurate.

As an expert the physician will frequently be called upon for his opinion, and as his conclusions are to be deduced from proven facts, they must be carefully drawn to possess any value. To perform this duty thoroughly he should therefore not wait until in the witness-box. Tidy's advice may well apply at this point. He says: "And if in the quiet of your study you fail to come to a satisfactory conclusion, do not attempt a wild conjecture in the hurry and excitement of the witness-box. To *be* accurate, is ten thousand times better than to *appear* brilliant."

The physician should carefully study the opinions held and expressed by others, and be able to give good definite reasons why he adopts some and rejects others, always remembering that he will be exposed to the scathing fire of cross-examination.

He should bear in mind the difference between a fact and

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an opinion so that there may be no confusion in his mind regarding their identity. For example, it is a fact that certain drugs are deadly poisons; but their action in producing certain effects is an opinion. The direction, size, and character of a wound are facts. Deductions drawn as to the manner in which the wound was produced, or for what purpose, is, in most cases, a matter of opinion. An opinion, however, is always based on facts, and either a personal knowledge of the circumstances relating to these facts, or knowledge gained from undisputed authority concerning them, is essential. No tolerance can be given to hearsay or rumor.

A biased statement given by a witness is invariably detected, and an attempt of the witness to arrogate to himself any of the duties of the jury, injures the value of his evidence.

The plainest English possible should be employed, and any tendency to exaggeration suppressed. Be sure before answering that the entire question is thoroughly understood, and the question alone asked should be answered without ambiguity or useless expressions. All "ifs" and "thats" should be omitted if possible, and the answers should convey real meaning in such clear, unmistakable language that there can be no misunderstanding.

If no distinct opinion on a certain subject has been formed, there should be no hesitation in saying so; and the physician should never allow himself to be drawn into, or give, an opinion formed on the spur of the moment, in the witness-box.

As nearly as possible the exact language of conversations testified to, or authorities quoted, should be given.

When the close pressure of cross-examination occurs, the only safety of the witness is in coolness, self-possession, and a thorough knowledge of the case. If he lose his temper, he is sure to be led on until he irretrievably damages himself, his testimony, or his medical reputation.

Admitted ignorance of a question not understood is not only not condemnatory, but praiseworthy; and within certain limits the answer "I do not know" is both safe and honorable.

A witness may be obliged to answer yes or no in a given case; but, though he may not modify it, he has a right to explain his answer to make it comprehensible; and he should always avail himself of that privilege, to prevent any chance of a misunderstanding of his meaning. All facts should be given as the witness understands them, without reference as to their effect, and in opinions drawn from facts if any honest doubts arise, they should be plainly stated.

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The witness should never allow himself to be drawn into a discussion; but having given an opinion, and the reason for it, let it rest there. He is entitled to have the question fairly and clearly stated to him, and the utmost care is required that the conditions of a hypothetical case should be plainly discerned and properly understood by him before answering. If the hypothetical case contain impossibilities, or inconsistencies, he should never endeavor to give a mixed answer, but insist that a proper case be given him.

One of the most important points of all to be remembered is, that the opposing attorney will probably attempt to impair the value of important testimony given by the medical witness, by showing lack of professional knowledge, and will propound questions which are incapable of definite answers, because of differences of opinion among high medical and legal authorities. The only manner by which such an attack can be met, is to enter the court room prepared to state the existence of such differences, when they exist, and as they will probably relate either in a direct or remote manner to the subject of trial, the simple form of preparation is that recommended by Tidy, namely, get the case well up in your office before the trial.

Dewberry Root in Diarrhœa and Dysentery.—Dr. John S. Lynch, in the *Transactions of the Medical and Chirurgical Faculty of Maryland*, 1883, has an interesting article relating to the astringent influence of *rubus procumbens*, or dewberry root, from which we take the following:

In our eager search for new and efficient remedies, we are very apt to neglect and forget old and often most valuable ones. In no instance is this more of a truism than in the subject of this brief note. This medicine has been known for hundreds of years as a valuable anti-diarrhœa and dysenteric remedy to the profession, but it has been principally utilized in domestic practice. It belongs to the age of crude drugs when roots and herbs were given in bulk, before organic chemistry had succeeded in separating their active principles, or pharmacy had learned to make elegant and concentrated preparations of them. It has therefore, I apprehend, fallen into disuse. The discovery of the active principle of all vegetable astringents in tannic acid has led to the neglect of the study of the varying physiological effects of the various vegetables containing it, and has also led to the undue and untrue generalization that they all act alone by virtue of the tannic acid they contain, and were therefore

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only valuable in proportion to the amount of acid present. It is the *combination* of the various active principles of our drugs which gives them their specific action and determines their affinity for this or that tissue or organ or function of the body. Tannic acid, therefore, cannot represent the various roots and barks and leaves from which it is extracted, any more than ergotin or propylamin can represent ergot, or quinia, cinchona bark.

I have been led to make these reflections principally by the recent observations I have made on the use of rubus procumbens in diarrhœa and dysentery. There are doubtless many vegetable substances that contain more tannic or gallic acid than this, but none of these, not even tannic acid itself, is half so efficacious in the disorders mentioned.

Two years ago I was attending a patient who was slowly dying of phthisis, who threatened to be suddenly cut off by an intractable diarrhœa. Doubtless you have all seen the same thing, and some of you have seen it hundreds of times. After exhausting all the well-known astringents, and giving the largest doses of opium I dared to give, I at last thought of the old domestic remedy I had seen used when a boy with such success on my father's plantation, and which I had used in the South during the war between the States, in which one of the parties gained the dishonored preëminence of declaring for the first time in the history of civilization, medicines as "contraband of war."

In my search for the root I learned for the first time that a fluid extract could be found in some of our shops. A teaspoonful of the latter with 20 drops of deodorized tincture of opium was administered every second hour with the effect of arresting the diarrhœa promptly and completely. The man lived for two months afterwards, and though he was several times threatened with the diarrhœa again, one or two doses promptly arrested it, and he was saved the pain and exhaustion of this most disagreeable and fatal complication.

Since then I have used this fluid extract habitually in all cases of obstinate diarrhœa and dysentery, both in adults and infants, and it has never failed me in a single instance. In the summer diarrhœa of infants, I regard it as perfect a specific as any found in our materia medica, and I am glad to say that I have not lost a single infant from summer complaint during the two years I have used it.

Antiseptic Surgery in New York Hospitals.—In the *Cincinnati Lancet and Clinic*, November 17, 1883, there is an inter-

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esting letter written by Dr. J. N. Woodward, from which we make the following extract in reference to the form of antiseptic surgery now in use in the hospitals of New York City:

"Three years ago, the Lister spray was regarded as an indispensable part of the paraphernalia of the operating room. It was a nuisance, but it was faithfully used, both at the time of operation and at every dressing of the case, until there was no further danger of septic poisoning. To-day, we do not see the spray employed at any operations, save those in which the abdominal cavity is opened; but in its place we have the irrigator. Now the wound is almost constantly irrigated with an antiseptic solution; and its character, too, is another illustration of the change. For carbolic acid which was, even twelve months ago, the most popular antiseptic lotion for operation and other wounds, is now seldom used for that purpose by the most thorough-going antiseptic surgeons. In its stead we find that irrigation with a $\frac{1}{2400}$, or a stronger, solution of corrosive sublimate in water, is the most approved practice. A solution of 1 part of salicylic acid, 5 parts of boracic acid to 500 parts of water, is also used in the irrigator sometimes, especially in abdominal operations. Carbolic solutions are used for keeping instruments and sponges aseptic, for washing the integument about the wound, and for the hands; but they may be said to be seldom used for washing out the wound. The corrosive sublimate solutions are as antiseptic as the carbolic, and they possess two decided advantages over the latter. For, in the first place, the mercury never poisons the patient when used in this way; and, secondly, there is not so great a quantity of serum exuded by the blood vessels after the use of mercury as after the use of carbolic acid.

For ligatures and sutures, carbolized catgut is the favorite material: the experience of hospital practice here is in favor of its employment. Within six months the style of suture has changed: instead of the interrupted suture, the continuous form of suture is generally applied, and frequently two layers, a deep and a superficial layer, of continuous carbolized catgut suture, are put into the wound. The catgut sutures are absorbed in about fourteen days.

Disinfected rubber drainage tubes are still used; so also is the Lister protective. Iodoform, however, is a new antiseptic material; that is to say, it was introduced in comparatively recent times. It is very popular in New York. But few wounds now are not dusted with iodoform in hospital practice here. The protective is placed on the iodoform.

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Then carbolized gauze is put upon the wound. But the eight layers of gauze and the Mackintosh are not applied. Borated, salicylated, or sublimated cotton is put over the gauze and all are bound on with a gauze bandage. Peat is used, and wood-pulp also, by some surgeons, with satisfactory results.

The dressings are not changed upon the first appearance of discharge, as in the Lister method. But the spot of discharge is dusted with iodoform and covered with antiseptic cotton and a bandage. The case is re-dressed if the temperature rises to, and continues at 101° to 102°.

Otherwise you would wait until the wound had united throughout, or the drainage tubes should be removed. Tubes are, as a rule, allowed to remain about a week; at the end of that time they are either shortened or removed. At each dressing, until the wound has healed, every precaution is taken against the introduction of septic material into it and the irrigator with the mercury solution is always used.

Surgical practice may generally be tested fairly by the results obtained. Applying that criterion to this method, we find that it bears the test admirably. It is the rule to obtain primary union in the wound, and patients are not subjected to the wasting influence of fever, even after serious operations, as opening of joints, trephining, amputation, etc., etc. Of course, now and then, a case will have a febrile reaction; but with absolute truthfulness it may be affirmed, it is entirely the exception, now-a-days, after careful employment of the antiseptic method to have any surgical fever, septicæmia or pyæmia. Such results followed the careful application of the Lister dressing. But the Lister method was quite troublesome. The spray apparatus was often out of order; an irrigator is always in order. Carbolic solutions applied to the wound caused a large quantity of serum to transude from the vessels; after the use of the mercury solution the discharge is small in amount. Dressings do not require to be changed so frequently now and they need not be changed immediately on the first appearance of the discharge. The results obtained under the present method are satisfactory to the last degree. It would be difficult indeed to rival them.

Such are the more prominent points showing the modifications which the antiseptic method of Lister has undergone during the last few years. The new differs from the old, not at all in the principle, for in both the most scrupulous care is taken to exclude every element of septic poisoning. There

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is a difference between them in technique, and a difference which denotes progress."

Aphorisms Concerning Ligation for Arterial Hemorrhage.—In *The Polyclinic*, December 15, 1883, Dr. John B. Roberts presents the following valuable article on this important subject:

"I have elsewhere (*Philadelphia Medical Times*, January 27th, 1883) expressed an opinion that styptics are practically useless in general surgery, because either needless or inefficient; and that hemorrhage should be controlled by either pressure or ligation. I now desire to formulate the manner of applying ligation to the arrest of arterial bleeding. The five rules which should guide the surgeon are expressed in the following aphoristic sentences:—

I. In primary hemorrhage do not ligate arteries not actually bleeding, but have the patient carefully watched.

The reasons for this rule:—

1. It is possible that bleeding has permanently ceased.
2. It is difficult to be sure from which arteries the bleeding comes.
3. All manipulations in wounds are to be avoided unless demanded.

Exceptions to this rule:—

1. When a large vessel is plainly seen pulsating in the wound.
2. When the occurrence of even slight secondary hemorrhage would be very disastrous, as in very anæmic patients.
3. When the patient must necessarily be away from surgical scrutiny.

II. In both primary and secondary hemorrhage the ligature should be applied, when practicable, in the wound at the point where the artery bleeds, and not above, in the continuity of the vessel.

Reasons for this rule:—

1. It is frequently impossible to know which artery is injured until the wound is opened.
2. Secondary hemorrhage may occur even after such ligation in continuity from establishment of the collateral circulation. This secondary bleeding may come even from the proximal end of the cut vessel, if a branch of considerable size is given off between the wound and the point of ligation.
3. Ligation in continuity makes a second wound and adds the possible complications of this wound to the patient's original dangers.

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4. Ligation in continuity remains as a reserve step, still possible, if ligation in the wound fails.

Exceptions to this rule:—

None.

III. If the artery is completely severed both ends should be ligated; if it is partly divided or punctured, a ligature should be applied on each side of such wound.

Reason for this rule:—

The collateral circulation will probably cause secondary hemorrhage from the distal portion of the vessel, unless double ligation is adopted.

Exception to this rule:—

When the distal end of the artery cannot be found, pressure must be made in its neighborhood.

IV. If a large artery is wounded near its origin, tie it below the wound, and tie the trunk from which it arises both above and below the point of origin of the branch. If a trunk is wounded near the origin of a large branch tie the trunk with two ligatures in the ordinary manner, and apply a third ligature to the branch.

Reason for this rule:—

The force of a large current of blood near the internal clot may lead to its displacement and cause secondary bleeding when the silk ligature causes ulceration of the external coat, or the catgut or flat ligature has been absorbed.

Exception to this rule:—

None.

IV. When ligation of the artery in the wound is impracticable, as happens in deep wounds of the pelvis, ligation in continuity may be permitted."

Cheken.—In the November number, 1883, of the *Therapeutic Gazette*, Dr. W. S. Gottheil, of New York City, reports the clinical history of a number of cases of pleurisy, chronic bronchitis and phthisis in Charity Hospital, New York, in which the fluid extract of cheken was employed, generally with excellent results. This remedy seemed to have an extraordinary power in relieving the cough and dyspnœa which are so troublesome to the patient in the diseases mentioned, its soothing effect becoming apparent very soon after its first exhibition. The fluid extract was administered in doses varying from one-half dram to two drams, *ter in die*, and generally the patient appreciated the alleviation of the cough even before the physician. Certain cases, however, experienced no change for the better in the character of the

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bronchial affection, and in some of these the administration of fluid extract of yerba santa in doses of from fifteen drops to one dram seemed productive of good. Such a full clinical history of the employment of any of the newer remedies, as is given by Dr. Gottheil in the report referred to, is always of value to the profession, and it is to be regretted that other practitioners do not give records of such trials in other institutions, as he has done of the use of cheken in the hospital mentioned.

What Patients Desire to Know.—At the opening of the Leeds School of Medicine, England, last fall, Dr. T. Clifford Allbutt delivered an address, afterward published in the *British Medical Journal*, replete with the practical wisdom which comes from long experience, in the course of which he gives the following excellent advice. He says: "A shake of the head and a dark allusion to the liver will not now satisfy an intelligent patient, nor ought it to do so. Fact and due reason must guide our language; yet people now-a-days 'want to know, you know,' and they are right. Such persons, wholly free from morbid curiosity, feel nevertheless that they ought to carry away with them a definite notion of their own ailment—where it is, and how you will try to avert it. If you have no story for them, some one else has; and you must be brave enough to point out, if necessary, where your knowledge ends. Avoid infallibility. As some hot-tempered person cries, 'If you know nothing, why the deuce can't you say so?' There is no better test of a man's knowledge than his neat delineation of the shore line of his ignorance. As a rule, a patient calls on you for information as well as skill; and while you are incapable of brutal frankness, your sympathy will be wise enough to teach you to give your opinions candidly and clearly."

Subcutaneous Nerve-stretching in Sciatic Neuralgia.—In the *Transactions of the Medical and Chirurgical Faculty of Maryland*, 1883, Dr. J. W. Chambers, after a consideration of the above subject, illustrated by cases occurring in his own practice, sums up with the following conclusions:

"1st. That the result of subcutaneous stretching of the sciatic nerve in rebellious cases of sciatic neuralgia, is highly satisfactory.

2nd. That from effects produced by the subcutaneous method, it is highly probable that all required force can be obtained. This I think I have fairly shown upon the dead

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subject by exposing the spinal cord and then stretching the nerve. Subcutaneously the impression could by this means be readily observed to be very perceptibly affected, and from its simplicity and safety it should largely supersede the cutting method in cases where the sciatic is the nerve to be stretched.

3rd. That the nerve by this method can be sufficiently stretched so as to produce anæsthesia.

4th. That moderate elongation of a nerve impairs its sensory, and but little, if at all, its motor function.

5th. That considerable force may be applied to a nerve trunk without seriously impairing its motor function.

6th. That it is not necessary or justifiable to employ more force than just enough to produce anæsthesia."

The Doctor's method of operating is as follows: The patient is placed upon the table, the pelvis being strongly pressed against the plane by an assistant, while the operator strongly extends the leg and thigh, and with the leg kept extended, the thigh is flexed upon the abdomen until the toes almost touch the head of the patient. The limb is kept in this position for three minutes. No anæsthetic is given, and the operation, while relieving the sciatica, causes the patient considerable pain and stiffness in the posterior thigh muscles, which however pass away before the end of the third day after stretching.

A Hodge Pessary Worn Thirteen Years.—The history of this curious case was read before the Northwest Texas Medical and Surgical Association, April, 1883, and reported in the *Texas Courier-Record of Medicine*, November, 1883, by Dr. C. F. Paine, of Comanche, Texas, where a pessary had been introduced, and its existence forgotten for the length of time mentioned. Cases of like nature occur but seldom, and its rarity makes the following extract from the article named interesting.

On May 17th, 1880, I was requested by my father, Dr. F. T. Paine, to visit with him Mrs. H., a very intelligent English woman, aged 59 years, who had been married six years, and a resident of Comanche county, for the purpose of removing what he correctly considered a Hodge horse-shoe pessary, of large size, from the vagina, which, according to the statement of the patient, had been introduced thirteen years previously for the relief of a prolapsus, and which had been entirely forgotten by her until its detection by my father.

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Upon visiting Mrs. H., and informing her that it would be necessary to administer an anæsthetic, and apprising her of the possible difficulties that might attend the operation, she became very nervous, and finally decided that rather than submit to chloroform she would wear her vaginal appendage the remainder of her days.

All argument being in vain, I at last gained her consent to make a digital examination for myself. Finding that the tissues in which the instrument were firmly imbedded, could by time and patience be broken up, I, with her consent proceeded to do so. This being accomplished, I attempted to dislodge the instrument, but failing in this, it occurred to me that by severing its inferior extremity diagonally across, I might be able to so overlap the ends as to lessen its diameter and thereby facilitate its removal. This being done, my purpose was gained—the removal of the pessary.

It can be readily imagined how an exhaustive muco-purulent discharge was kept up all those years, so far undermining the patient's health that, while it is greatly improved, she can scarcely ever hope to regain it entirely. The slight hemorrhage which followed was readily controlled by styptics.

Before closing this report I cannot refrain from giving the ridiculous expression to which she gave vent when the pessary was removed. Uttering a shriek, evidently from pain, she exclaimed, "The baby is born and his name is Anthony." She had fortunately never conceived.

There are other points of interest that I might mention, but I forbear. Allow me to state, however, that this is the third case of a similar kind that has come to my knowledge; none, however, of such long standing. One of these was related by Prof. Parvin, of the Louisville University, to the class of 1872, of which I was a member. The other, if I mistake not, was reported in the *New Orleans Medical and Surgical Journal.*

Result of Delayed Enucleation of an Injured Eye.—In the *Maryland Medical Journal*, November 17, 1883, Dr. Julian J. Chisolm, of Baltimore, in the course of his report of work done at the Presbyterian Eye, Ear and Throat Charity Hospital of that city, mentions the following as an instructive case which made a deep impression upon him.

A lad, aged 10, was shot in the face by the accidental discharge of a pistol loaded with small shot. Some of these had perforated his right eye. When I saw him, some days after the accident, the cornea was cloudy, lens opaque, with

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small wounds in the cornea, and one in the scleral region near the corneal border. The opacity of the lens was an indication that the shot had perforated, and the absence of even an appreciation of light indicated that the eye had been destroyed. I explained to his father that the eye was not only lost to all future use, but that from the nature of the accident it was very dangerous to retain it. I therefore urged him to have it removed promptly to save the boy suffering and possibly the loss of the other eye. The father would not listen to such a proposition as the taking out of the injured eye. He said that he would assume all responsibility in the matter, and would have his son treated without an operation, as he would rather see him dead than have the eye taken out. Five months afterwards he brought the boy back to me to have his injured eye removed. The boy had not only had five months of suffering, but for the past month the good eye had taken on a sympathetic plastic inflammation of the iris and had now only appreciation of light. I removed the lost eye, which accident had destroyed, to relieve him of the pain which was constant in it. For the eye lost by sympathy, I could do nothing. The father, through his own obstinacy, had a blind son to provide for. The removal of the injured eye in the beginning would have saved him further trouble.

The rule which experience has laid down is a good one, viz: Remove all eyes lost by accident before they become a source of serious injury to the remaining eye. When the lost eye is out, all danger from sympathetic extension ceases.

By prompt action you prevent suffering from the injured eye and blindness in the good one.

Transfusion of Blood by Hypodermatic Injection.—We take the following from the *Medical News*, December, 1883:

Our Italian *confrères* have manifested much ingenuity in devising methods of transfusion. The most recent contribution made by them to this subject is transfusion hypodermatically. Thus Dr. Paladini has reported a case in which complete success followed the injection under the skin of the abdomen of about 130 grammes or four ounces of blood. The case was one of menorrhagia, the patient losing so much as to faint repeatedly, although recumbent. The husband of the woman furnished the blood. By means of a hypodermatic syringe the blood was drawn from the veins of the donor, and was injected through the canula of a trocar previously introduced, and by means of which a cavity was

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hollowed out in the connective tissue to receive the blood. The blood-tumor thus formed disappeared in two hours, and neither induration nor abscess was produced. The hemorrhage ceased, the patient took food, and the night following slept tranquilly. The subsequent recovery proceeded without accident.

Uterine Fibroid Treated with Normal Liquid Ergot and Jamaica Dogwood.—In the *Therapeutic Gazette*, December, 1888, Dr. Frank A. Ramsey, of Knoxville, Tenn., reports a case of large fibroid tumor of the uterus successfully treated by the use of Parke, Davis & Co's Normal Liquid Ergot, and fluid extract of Jamaica Dogwood. His plan of treatment, and the results obtained, are shown in the following extract from his article:

The patient was directed to take thirty drops of Jamaica dogwood at intervals of eight and six hours for relief of pain and discomfort and a syringefull of normal liquid ergot was injected at a point on the surface over the tumor. The use of the hypodermic syringe was repeated every forty-eight hours for ten days; the needle was always introduced perpendicularly and to the full extent of its length, the tissues of the abdominal walls being embraced between the thumb and fingers of the left hand. After five administrations the instrument was irregularly employed two and three times a week for a month, and subsequently for three months once each week.

The dogwood was taken every day, once or twice, she having discerned the impression it made on her, and at her own instance made the dose larger and smaller, according to the length or shortness of intervals, or frequency of repeating the dose of the medicine. This course was daily followed until she left to engage as laundress at Tate's Springs, after seven months of this treatment. Treatment was suspended from the last week of May, until the second week in November, last year. Then irregularly followed, injections being given once and twice a month for a few months, when it was again stopped. The Jamaica dogwood, at her own option, was taken perhaps once a week—sometimes more frequently, and occasionally not so often. This use of Jamaica dogwood has caused none of the thirst of an inebriate, nor the miseries of an opiate slave, nor the habitual resort to an agent to alter the sensations experienced by one in normal health.

It is notable that from the day the treatment of the woman began, there was perceptible, positive release from the incu-

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bus of inability, every successive day pressing more and more upon her to leave her bed, and her house, and begin again the discharge of active duties to which she had been accustomed. Upon these she entered within two months, gradually regaining physical, general ability. For a while there was no decrease in the size of the tumor, nor alteration in the appearance of the abdominal enlargement. Within two weeks there was, on palpation, perceptible increase in the hardness of the tumor, as felt through the tissues of the abdominal walls. In the course of several weeks more, the size of the tumor was discovered to have lessened. It afterward certainly decreased, until from apparently completely filling the abdominal cavity, it is now no larger than a thick-rind Florida orange. Pain at menstrual periods is almost absent, except on occasion from tangible cause, and then easily controlled by the dogwood. The enlargement of the womb has also abated.

I have used other preparations of ergot, and hypodermically and successfully, in treating fibroid tumors, but in no instance with as rapid lessening of the mass, as in this one under the administration of Normal Liquid Ergot and Jamaica dogwood.

The Value of the Electrolytic Method in Surgical Diseases. At the conclusion of an article upon this subject, read before the American Academy of Medicine, and published in the *New England Medical Monthly*, December 15, 1883, Dr. A. D. Rockwell offers the following summary:

1. The success to be met with in the treatment of malignant growths in general is but trifling. The size is sometimes reduced, and the pain is almost always greatly alleviated. In the class of cases, however, termed epithelioma, when the disease does not extensively involve the subjacent tissues, and where it is easily reached, it is probable that in the majority of cases the very best results will follow thorough and persistent treatment.

2. Fibroids being dense and comparatively dry, do not readily shrink under electrolysis, and it is seldom that we can accomplish more than some slight diminution in bulk. The results following this limited influence, however, are especially valuable in the case of uterine fibroids of an intra mural character where the knife cannot be used. The pressure upon the bladder and rectum is in these cases greatly lessened, or entirely dissipated, and the relief that follows is immense.

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3. It is in erectile and small cystic tumors that electrolysis is most effective. In these conditions it is indeed a specific. The cure that follows is complete, and with proper care scars can be avoided.

4. The ordinary form of goitre acts somewhat capriciously under electrolytic treatment. Goitres that are small and soft may not only be treated effectually by the introduction of needles, but external applications alone will sometimes cause them to entirely disappear. Even when they are quite large, if their density is not too great, a perfect cure may follow. Where they do not entirely disappear they may almost invariably be reduced in size, affording in many cases marked relief from the pressure that is so distressing.

5. By this method hairs may be permanently removed. The negative pole and a weak current are to be used.

6. In many cases of urethral stricture permanent relief is afforded. A more extended experience, however, is necessary to establish its exact value.

Anterior Elytroraphy.—In the course of an article on the surgical treatment of prolapsus uteri, in the *Obstetrical Gazette*, November, 1883, Dr. Horatio R. Bigelow, of Washington, D. C., gives the following clear and concise description of this operation: "This is the favorite practice of American surgeons because cystocele usually complicates *procidentia uteri*. Marion Sims' first operation consisted in a V shaped incision of the mucous membrane of the anterior wall of the vagina, the apex being near the neck of the bladder and the two arms extending upon the sides of the cervix uteri. The two denuded surfaces were then brought together by silver sutures passed transversely. He has since modified this plan so that now in place of making the suture after having denuded a large oval surface of the anterior vaginal wall (as in his first attempts) he dissects off a portion of mucous membrane in the form of a trowel, so as to form a true fold, the upper ends of which, when brought into contact, form a support for the cervix. To remedy the defects of the simple V incision, which consisted in the formation of a pouch, so that the cervix slipped behind the septum into the pouch, and the fundus became fixed in the hollow of the sacrum, Dr. Emmet simply denuded the vaginal mucous membrane in a line across the cul-de-sac, making a regular triangle with its apex at the neck of the bladder and its base at the cervix. Emmet completes the triangle by denuding the strip which in Sims' trowel-shaped denudation, is left untouched at the upper end

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of the triangle. Dr. T. G. Thomas and Dr. Dawson remove the entire mucous membrane enclosed within the triangle. Dr. Dawson catches up an inch or more of the mucous membrane with a tenaculum to one side of the cervix, and removes with Emmet's curved scissors a piece in the shape of a cone. This serves as an outline. After the entire surface within the triangle is removed, silver sutures are passed immediately below the denuded surface entering and emerging about one-fourth of an inch from the edges, and introduced first at the upper end of the triangle. After these sutures are passed, the denuded surface is folded with a sound so as to bring its opposing faces together. In this way the wire is folded within the tissues so that the sutures act as splints in keeping the vaginal fold in position and the denuded surfaces in apposition. In 1869 Emmet adopted the following method: The uterus is first anteverted and its neck crowded up into the posterior cul-de-sac by a sponge probang. He then endeavors to find two points, one about half an inch from the cervix on each side and a little behind the anterior lip, which can be drawn together in front of the uterus by means of a tenaculum in each hand. When two such points can be thus brought together without undue tension, the surfaces are to be freshened. Then a surface about half an inch square is to be denuded with scissors about the point of the other tenaculum. Next a similar surface is to be freshened about the point of the other tenaculum, and a strip afterwards removed from the vaginal surface, in front of the uterus, about an inch long, by half an inch wide. Beneath each of these freshened surfaces a needle armed with a silk loop, to which the silver wire is twisted, is passed, so that the three surfaces are brought together in front of the cervix forming a fold. Courty depresses the posterior wall and perineum by a Sims' speculum, and fixes in the anterior lip of the cervix the two terminal ends of a catheter, the convexity of which depresses the anterior vaginal wall toward the bladder; the curve of the catheter is buried under the lateral folds formed by the mucous membrane, where they meet in the median line. He then passes a solution of nitrate of silver over these folds and afterwards one of salt, which whitens them and allows him to make out exactly the surface to be denuded. The artificial support of the uterus is not secured so satisfactorily by anterior as by posterior elytroraphy or the colporaphy of Simon. Then, too, the operation is by no means an easy one and requires exceedingly delicate manipulation."

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Iodide of Potassium in Typhoid Fever.—From the *Louisville Medical News*, November, 17th, 1883, we take the following article by Dr. R. N. Barbour, on the above named subject.

"Since December, 1881, I have treated twenty-six cases of this disease with the most favorable results, and attribute the success mainly to the iodide of potassium. After a practice of forty-eight years, I was, until the date alluded to, like many others, undecided as to the best mode of treatment. In conversation, some years since, with an old friend and practitioner of Louisiana, he informed me that in his State he had observed many cases of continued fever which were not amenable to quinine, but in which iodide of potassium had proved a most efficient remedy. I inquired of him if the fever was not typhoid. He said it was not so regarded by the profession, but *malarial*. In the twenty-six cases previously alluded to, I had no doubt as to diagnosis, the great majority of them being typical in character. Knowing the iodide of potassium to be alterative and a promoter of the secretions, I determined to test its effect in relieving the congestion and inflammation of the ileum characteristic of typhoid.

Treatment.—When the diarrhœa was not well marked, I gave castor-oil and glycerine, ā ā ʒiv, to relieve the bowels of all ingesta and irritative secretions; after this grs. v of potassium iodide were given every four hours, largely diluted with water. Between the doses of the potassium, four drops of the oil of turpentine in mucilage were also given. When diarrhœa was persistent, five drops tincture of opium were added to each dose of the turpentine until the diarrhœa was checked. The bowels were rubbed three times a day with equal parts of olive oil and turpentine, and a flaxseed poultice was kept on the abdomen as long as tenderness remained. The extremities and body, when dry and hot, were sponged frequently. I required the bowels to be moved every thirty hours, to prevent the accumulation of acrid secretions. The diet was strictly fluid, and in small quantities at a time. Buttermilk was substituted for water, if the patient preferred it. This has generally agreed well with the stomach, and has produced no diarrhœa. On the sixth or seventh day of treatment the skin becomes gently moist, and on the following day the temperature begins to decline, and continues to do so. The temperature is normal on the twelfth day of treatment. The tongue continues moist throughout the continuance of the disease.

I claim that this treatment arrests the congestion and in-

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flammation in the first stage of the fever, the ulcerative stage being prevented.

There has been no relapse in any of the above cases, and no other remedies but the potassium and turpentine were used, neither quinine nor stimulants being given.

Resorcin in Otorrhœa.—Dr. Charles H. Burnett, in the *Medical Times*, November 17, 1883, has an interesting article on this subject in which he says:

"Resorcin, $C_6H_4(HO)_2$, is a parabi-oxybenzole, discovered in 1864 by Hlasiwetz and Barth, and introduced into medical practice in 1877 by Andeer. Dr. E. De Rossi, of Rome, was among the first, if not the first, to use this drug in the local treatment of chronic purulent otitis media. In the *Archives of Otology* (1880, p. 244) Dr. De Rossi reported that he had then been using resorcin for some months, having in this time employed it in two hundred cases of chronic purulent otitis, and he stated that he felt justified in claiming that no remedy at his disposal had ever given him such substantial results in this obstinate affection as resorcin. Cases which had been unsuccessfully treated with caustics for months, yielded after a few applications of this remedy. Resorcin is soluble in alcohol, glycerin, and water, and it may be used pure or in solution in varying proportions. Its therapeutic value would seem to depend upon its antiseptic properties.

I have used powdered resorcin both pure and mixed with boric acid, one part to seven of the latter, blowing it into the fundus of the canal of a discharging ear after the latter had been cleansed either by syringing or by swabbing with absorbent cotton. After the ear is thus cleansed, a little of the powdered resorcin, or borated resorcin, is taken up by means of a short quill on one end of a piece of black-rubber tubing, the other end of which tubing is held in the operator's mouth. Under good illumination of the canal and its fundus with the forehead-mirror, the powdered resorcin may thus be blown into the drum-cavity, if the perforation in the drum-membrane be large enough. Being disposed to deliquesce, it is not a perfect powder for convenient insufflation when used pure, as it is not easily made into a dust. Hence the borated form is preferable. I have used it also by swabbing the mucous cavity of the discharging drum (by first moistening some cotton twisted on the cottonholder with water, next mixing some of the pure resorcin into a thin paste until it is absorbed by the cotton, then swabbing the ear with it.) It certainly has proved a good remedy in many obstinate cases of otorrhœa."

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Can Cancer of the Penis be Acquired by Inoculation from Cancer of the Cervix Uteri?—The *Medical Record*, November 17, 1883, has the following remarks upon this subject:

"Considerable comment has been aroused, and naturally, by the statement of Dr. T. G. Thomas, in a clinical lecture recently delivered, that there was a serious danger of contracting cancer of the penis by sexual intercourse with women suffering from uterine cancer. Dr. Thomas asserted that 'repeated instances of cancer being contracted in this way were on record.' And he always warned the husbands of women suffering from this disease against the danger to which they might subject themselves.

In a subsequent letter to the *Weekly Medical Review*, Dr. Thomas modifies his first statements very much. He writes: 'If in the heat of a clinical lecture I should have stated the matter so strongly, I desire to modify my assertions, for I cannot sustain them, either from personal experience or a knowledge of the experience of others. I have met with but one case of cancer of the penis which I thought had this origin, and I have not at my disposal evidence of the frequency of this disease after such exposure in the practice of others. I always guard husbands from exposing themselves to the danger of sexual intercourse where uterine cancer exists, and from *a priori* reasoning should look upon the danger of infection where an abrasion existed near the frenum as one which should always be guarded against.'

Meanwhile Dr. Paul F. Mundé has been investigating this subject, and presents the results in the *New York Medical Journal* of October 27th. This gentleman, never having met a case of this kind himself, wrote letters of inquiry to Drs. T. E. Satterthwaite, W. H. Welch, and R. F. Weir, of this city, also to Dr. Zerny, of Heidelberg, and Th. Billroth, of Vienna. From all these gentlemen the answers were that in their experience they had met with no case of cancer of the penis which had been acquired by local contagion in sexual intercourse. The opinion was general that cancer, in all probability, was not transmitted in that way, although the *possibility* of the occurrence could not be entirely denied. Experiments made to test the question of the inoculability of cancer have almost always been failures. Langenbeck injected fresh cancerous material into the femoral vein of a dog, and, a few months later, found some small cancerous nodules in the lungs. But Dr. Welch quotes Virchow as saying that these nodules resembled primary cancer. Dr. D'Outrelepont made experiments which were entirely nega-

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tive, while Nowinsky claims to have produced two small growths out of forty-two otherwise unsuccessful inoculations. Demarquay, in an analysis of one hundred and thirty-four cases of cancer of the penis, found one in which the cause given was a local contagion. This author does not believe, however, that cancer of the penis is ever really contracted in this way. Dr. Welch quotes Langenbeck as saying that he had seen three or four cases caused by local contagion.

Both Zerny and Dr. Munde refer to the fact that cancer of the finger has never been contracted, so far as is known, by physicians or nurses whose work obliges them to make frequent digital examinations of cancerous cervices.

The interesting evidence thus collected by Dr. Munde tends to show that there is very little if any danger of contracting cancer by sexual intercourse. No case indisputably illustrating this mode of origin appears yet to have been reported —unless Langenbeck has recently published those that he claims to have seen.

The evidence is by no means all in, however, and as few deny the *possibility* of local contagion, it is to be hoped that clinical researches regarding this important matter will continue."

Toxic Action of Convallaria Majalis.—The *Weekly Medical Review*, December 1, 1883, says:

"Convallaria majalis, recommended so highly in cardiac affections and held to be free from cumulative action and toxic properties, is not as perfectly safe as some have believed. Dr. George Herschell relates in the *Lancet* the case of a man, apparently healthy, who had an irregular pulse following worry and overwork two years ago. Physical examination failed to reveal any cardiac lesion, and all the other organs were healthy. The patient had been taking digitalis, but this was discontinued, and, after an interval of a month or two, tincture of convallaria was ordered in five minim doses three times a day. After a few doses he was obliged to stop its use on account of its remarkable effects. Almost immediately after taking a dose the pulse became nearly imperceptible at the wrist, and there was a sense of oppression over the sternum, nausea, cold feet, vertigo, flatulence, and a feeling of utter prostration. These symptoms lasted two hours, but came on again at each repetition of the dose. Dr. Herschell advises caution in the use of the drug, beginning with doses even less than those usually considered as the minimum."

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Book Notices, &c.

A Manual of Practical Hygiene. By EDWARD A. PARKES, M. D., F. R. S., Late Professor of Military Hygiene in the Army Medical School; Emeritus Professor of Clinical Medicine in University College, London, etc. Edlted by F. L. B. FRANCOIS DE CHAUMONT, M. D., F. R. S., Fellow of the Royal College of Surgeons of Edinburgh, etc. Sixth Edition. With Appendix. Giving the American Practice in Matters Relating to Hygiene. Prepared by, and under the supervision of FREDERICK N. OWEN, Civil and Sanitary Engineer. Vol. I. New York: Wm. Wood & Co. 1883. 8vo. Pp. 368. (For sale by West, Johnston & Co., Richmond, Va.)

This, the September, 1883, No. of Wood's Library of Standard Medical Authors, is the latest edition of Parkes' standard work on Hygiene, and is fully kept up to the high grade of excellence it has always held. We have before reviewed the book, but as it has been some time ago, it may be well to hastily glance over the contents. This volume deals with matters pertaining to Water, Air, Ventilation, Food and its Quality, Choice and Cooking, Beverages and Condiments and Soils. The section of chapter first which refers to the examination of water for hygienic purposes is especially full and valuable, giving in the clearest terms the different methods employed; and in view of the many outbreaks of diarrhœa, dysentery, typhoid and other fevers which can fairly be held to be produced by the use of impure water, every physician who is able should study this subject as carefully as possible. An extremely practical consideration of the rules governing ventilation is given in chapter fifth, and the sections referring to the application of such rules are worth the most careful study. The discussion of nitrogenous and non-nitrogenous substances, and the methods of choice and cooking of the different foods, should be read not only by the practitioner but by every one interested in the proper preservation of the body in a state of health. In reference to the use of alcohol, the author thinks that while some portion of the spirit passes out through the natural excretory channels of the body, probably the larger portion is destroyed, and that it seems at present most likely that it is transformed into acetic acid, which, uniting with the soda in the circulation, forms a carbonate. If this is true, then alcohol produces not only its primary effects as alcohol, but later as acetic acid it neutralizes the soda of the blood. The rule laid down by Dr. Anstie as to the limit of the useful

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effect of alcohol, is upheld by further experiment. He found that the amount of one fluid ounce and a half in twenty-four hours caused the appearance of alcohol in the urine in a healthy man, and regards that as a sign that as much has been taken as can be disposed of by the body. After a careful consideration of the claims of alcohol as a dietetic, the author concludes, that while it cannot be condemned altogether as an article of diet in health, yet its value in that respect has been considerably overrated.

The late Dr. Parkes' definition of Hygiene is, that it is the art which "aims at rendering growth more perfect, decay less rapid, life more vigorous, death more remote," and every medical man who is willing to accept such definition, can hardly do more toward perfecting himself in that art, than by carefully studying, and carrying out as far as possible, the teaching and method found in this volume.

The Medical Students' Manual of Chemistry. By R. A. WITTHAUS, A. M., M. D., Professor of Chemistry and Toxicology in the University of Buffalo; Professor of Chemistry and Toxicology in the University of Vermont, etc. New York: William Wood & Co. 1883. 8vo. Pp. 370. (For sale by West, Johnston & Co., Richmond, Va.)

The author intended this work mainly to take the place of the more bulky treatises on chemistry in the libraries of medical students, believing that it is arranged in such a manner as to be not only more acceptable, but also of more practical value to that class. He has attempted to show more clearly than is usual in text-books of the kind, the applications of chemistry to medical science. He has necessarily been obliged to omit much that has a purely technological interest, that he might be able to present portions of special chemistry that would be of practical interest to the medical practitioner, and so far as we are able to judge, he has performed the task in an efficient manner. Special attention has been given to chemical physiology, and the chemistry of hygiene and therapeutics have been fully dwelt upon. The work is divided into three parts, relating first to the principles of chemical science, second to special chemistry, and the third section is devoted to a description of operations and manipulations which the author believes to be of especial utility to the student and practitioner. The second part shows in some degree a departure from the methods usually followed in text-books on chemistry. "The elements are classed, not in metals and metalloids, a classifica-

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tion as arbitrary as scientific, but into classes and groups according to their *chemical* characters." Other changes have been made from established custom, in each case with a view to rendering the study of physiological chemistry not only more exact, but to place it in a condition to be more readily assimilated by the student. Attention is given as much as possible to analytical chemistry, and we see much to commend for simplicity and neatness in many of the methods given.

The work is written in an easy style, everything being sacrificed to make the subject matter easily understood, and that there is great need of such a volume all medical students will testify. Beyond watching the brilliant experiments of the professor of chemistry and taking copious notes of symbols, etc., how many students of medicine interest themselves in that special study enough to do more than pass the dreaded "green-room?" And one of the reasons perhaps for the dearth of interest so often seen, is the fact that few text-books on chemistry are written in such a manner as to make the student feel that he can master them. The work seems too much to undertake in the limited time at command, and he is satisfied with the smattering he is able to pick up for the passing of his final examination, promising himself that he really will learn that portion of chemistry strictly relating to the practice of medicine after he graduates. Dr. Witthaus has given us a manual that will be of great assistance to the student either during his course, or after he has a diploma, because his years of teaching have shown him precisely what manner of text-book is needed.

Manual of General Medicinal Technology. Including Prescription Writing. By EDWARD CURTIS, A. M., M. D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, New York City. New York: Wm. Wood & Co. 1883. 16mo. Pp. 234. (For sale by West, Johnston & Co., Richmond, Va.)

On account of the small space usually allowed in all works on materia medica to topics relating to medicinal technology, especially prescription writing, the author has felt that this little volume would be generally acceptable to students, and certain members of the profession who enter practice without having previously received the benefit of a classical education. An examination of the book shows that Dr. Curtis has been amply qualified for the task, as the information given is so pleasantly imparted, and yet in so complete a

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manner that it leaves nothing on the subject that is really essential, to be desired. The pure technicalities of prescription writing are fully discussed, and the author, we think, has succeeded in his efforts "to include so much of the elements of Latin as are necessary to the art." After treating at length of the technology of medicines, he devotes the latter portion of the book to the technology of medicating, and he is equally successful in imparting a clear understanding of both. There are few physicians in active practice who will not read this little book with pleasure as well as profit, while to the medical student it is invaluable.

A Guide to American Medical Students in Europe. By HENRY HUN, M. D., Lecturer on Diseases of the Nervous System in the Albany Medical College. New York: William Wood & Co. 1883. 12mo. Pp. 151. (For sale by West, Johnston & Co., Richmond, Va.)

This little book may be said, in a measure, to "supply a long felt want." As the author remarks, a large number of Americans go every year to Europe to complete their studies; and unfortunately the majority of them go abroad with the most indefinite idea of how medicine is taught there, what the difference in universities is, and who are the best teachers for an American to study under, the result being that much time is necessarily lost before setting down to work. Such information this work aims to give as fully as the size of the volume renders possible, the object of the author evidently being to present a book that can be conveniently carried about the person for ready reference. That portion of the Guide relating to Germany is naturally more ample and complete than any other, as most Americans who cross the water to study medicine, do so to take advantage of the many excellent clinical opportunities and clinical laboratory methods to be found and studied in that country. A list and description of the professors and teachers, clinics, hospitals, etc., to be found in each German and Austrian medical centre, as well as the manner and cost of living and studying, are given with the fullest necessary detail, and it would seem that every question likely to be asked on the subject by a young graduate going abroad, is here answered. The chapter on London gives a list of the lectures and clinics during the college course, as well as a list of the more important hospitals of that city, with the names of attached medical officers, the majority of whom are always ready to welcome an American visitor. The opportunities for in-

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struction and study in Paris are also given, the author showing plainly how limited the advantages there are, compared with some of the German cities.

PAMPHLETS, REPRINTS, ETC., RECEIVED for which we have no room for fuller notice, etc.; but most of which can be obtained by enclosing a letter stamp for pamphlet to the respective authors named.

Analysis of Eight Thousand Cases of Skin Disease. By L. DUNCAN BULKLEY, A. M., M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, Out-Patient Department, etc. (From the *Archives of Dermatology*, October, 1882.) Pp. 30.

The Application of Pressure in Diseases of the Uterus, Ovaries and Peri-Uterine Structures. By V. H. TALIAFERRO, M. D., Professor of Obstetrics and Diseases of Women and Children in the Atlanta Medical College. (From the *Atlanta Medical Register*, September, 1882.) Pp. 20.

Alcohol as a Food, a Medicine, a Poison, and as a Luxury. By GEO. C. PITZER, M. D., St. Louis, Mo. Pp. 61.

Aphasia—With Details of Two Interesting Cases. By PHILIP ZENNER, A. M., M. D., Cincinnati, O. (From the *Cincinnati Lancet and Clinic*, April 7th, 1883.) Pp. 9.

Gunshot Wound of Abdomen Treated by Opening Cavity and Suturing Intestines. By R. A. KINLOCH, M. D., Charleston, S. C., Professor of Surgery, Medical College State of South Carolina. Pp. 7.

The Electric Light in Sargical Diagnosis. By ROSWELL PARK, M. D., Chicago, Ill., Surgeon to the Michael Reese Hospital, etc. (From the *Annals of Anatomy and Surgery*, March, 1883.) Pp. 22.

The Digestive Power of Commercial Pepsin in Artificial Digesters and in the Stomach. By C. L. DANA, A. M., M. D., Professor of Physiology in the Women's Medical College of New York, etc. (From the *American Journal of the Medical Sciences*, October, 1882.) Pp. 11.

Duration of the Period of Incubation of Infectious Diseases. By F. PEYRE PORCHER, M. D., Charleston, S. C. (From *Transactions South Carolina Medical Association*, 1882.) Pp. 9.

The Clinical Diagnosis of Chronic Enlargement of the Testicle. By J. EDWIN MICHAEL, M. D., Baltimore, Md., Professor

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of Anatomy and Clinical Surgery in the University of Maryland. (From the *Maryland Medical Journal*, March 1st, 1883.) Pp. 13.

On Some Recent Advances in the Surgery of the Urinary Organs. Being the Address on Surgery delivered before the Fifty-First Annual Meeting of the British Medical Association, at Liverpool, August 1st, 1883. By REGINALD HARRISON, F. R. C. S., Surgeon to the Royal Infirmary, etc. Pp. 30.

An Alphabetical List of the Names of all Persons Residing in Washington City and the District of Columbia, June 1, 1880, *Aged Seventy-Five Years or More.* Copied from the U. S. Census Reports of 1880. Compiled by J. M. TONER, M. D., Washington, D. C. Pp. 20.

Treatment of Cancer of the Rectum: A Case of Amputation at Hip Joint. Recovery. By L. MCLANE TIFFANY, M. D., Baltimore, Md., Professor of Surgery, University of Maryland. (From *Transactions of the Medical and Chirurgical Faculty of Maryland*, 1882.) Pp. 9.

A Case of Lodgment of a Foreign Body in the Cavities of the Nose, Orbit, and Cranium. Removed by Operation after Remaining Five Months. Death. By HENRY D. NOYES, M. D., New York City. (From the *American Journal of the Medical Sciences*, July, 1882.) Pp. 16.

Relation of Eye and Spinal Diseases. By A. FRIEDENWALD, M. D., Professor of Diseases of the Eye and Ear, College of Physicians and Surgeons, Baltimore, Md. (From the *Transactions of the Medical and Chirurgical Faculty of Maryland*, 1883.) Pp. 13.

Diagnosis of Ovarian Tumors. Lectures Delivered by EDWARD BORCK, A. M., M. D., Professor of Surgery, College for Medical Practitioners, St. Louis, Mo. Pp. 16.

Extensive Ravages from Lupus, with Subsequent Cicatrization, Leaving but One Small Hole in the Face, which Represents both Mouth and Nose, and with Complete Closure of the Anterior Nasal Orifices. By JULIAN J. CHISOLM, M. D., Baltimore, Md. (From the *Archives of Ophthalmology*, June, 1882.) Pp. 5.

Trismus Nascentium, or the Lock-jaw of Infants. Its History, Cause, Prevention and Cure Illustrated by Cases and Post-Mortem Examinations, with Statistical Table of 229 *Deaths.* By J. F. HARTIGAN, M. D., of Washington, D. C. (From *American Journal of Medical Sciences*, January, 1884.) Pp. 39.

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Editorial.

SALUTATORY.

Having been for the past twelve months intimately associated with the former sole editor of this journal in an assistant editorial capacity, we have seen so much in his character to admire, and so much in his journalistic ability to endeavor to emulate, that we feel it an honor to stand with him in a position of equality as regards the *Virginia Medical Monthly*. He has done us the honor to believe that we are equal to the task of editing a journal whose circulation and influence have been built up entirely by his own unaided labor, and we should feel that we were unworthy of the position to which circumstances have called us, were it not for his judgment as one of the leaders in successful Southern journalism. Inspired by the example given us in his ten years of unwearying industry and manly steadfastness of purpose, we believe that with his help we may be able to satisfy the patrons of and subscribers to this journal, knowing that our shortcomings can easily be covered by the mantle of his ability, and that our sins of omission and commission can be atoned for by his journalistic experience.

Our aim is somewhat exalted, perhaps, but with the assistance of our senior, we intend to reach it; it is to make the *Virginia Medical Monthly* one of the most valuable professional journals in the land, and if ambition, industry and perseverance are the qualities necessary for the success of that purpose, we propose to reach the goal. Now that the senior editor has been placed in a position which relieves him of a portion of his editorial duties, there is every reason to expect that our friends will be more than satisfied with the progress of the *Monthly*, and we intend that the pages of the journal shall afford, not only the best original thought possible to secure in this country, but also the most valuable practical information that can be found in foreign or domestic medical literature.

With these few words we introduce ourselves personally to the readers of the *Monthly*, and though we are strangers

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to many of them, we beg that they do not judge us unfavorably because handicapped by the reputation of our senior. Our most earnest desire is to do only that which is right, and if at any time in the future it shall be found that we have not succeeded to the satisfaction of all our readers, we beg that those who may feel aggrieved at what we have done, or what we may have left undone, will credit us at least with that honesty of purpose which is the attribute of every straightforward, hard-working man. It is hoped that it will not be deemed too egotistical to here apply Kent's words: "That which ordinary men are fit for, I am qualified in; and the best of me is diligence."

WILLIAM H. COGGESHALL, M. D.

OUR ADVERTISERS.

With the beginning of the year we desire to call special attention to our advertising columns, where we think will be found announcements from the best and most reliable houses that deal in medicines, instruments, etc., required by the physician in active practice. The following list, although far from complete, will be found worth perusal by those interested in the best preparations and medical and surgical appliances of the day.

Beef Peptonoids.—This, although a comparatively recent preparation, coming before the profession because of its value as a rectal aliment in the case of President Garfield, has amply fulfilled all the great merit claimed for it by its manufacturers, Reed & Carnrick, New York City. The associate editor of this journal has had ample opportunity to test its value during the past eighteen months, having used it in every case in his practice where a concentrated food was required, and he has found it to be an absolute necessity in all asthenic cases, both in children and adults. He can confidently recommend it from personal experience.

Mellin's Food.—Wherever this food has been faithfully employed it has answered all the qualifications for a substitute for mother's milk. It is recommended by the highest medical authorities as the best food for infants. Doliber, Goodale & Co., Boston, Mass., are the proprietors and manufacturers.

Bickford Knitting Company still make the Seamless, Skin-Fitting Shirts so successfully used in the application of the

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plaster of Paris jacket, and refer to Dr. Lewis A. Sayre by permission, as to their perfect adaptability to the purpose.

Battle & Co.—This enterprising St. Louis firm have during the past year added to their widely used preparations Iodia and Bromidia, a combination of Coca and the Cereal Lacto-Phosphoids, to which they have given the name Cocalac, and a liquid form of the anodyne principle of Opium, which they call Papine. They claim for the former that it gives stimulation without reaction, and for the latter that it produces the good effects of opium without any tendency to produce nausea, vomiting, etc. As all their claims in reference to the good qualities of Iodia and Bromidia have been justified by clinical experience, it may well be believed that their later preparations have the value ascribed to them by the firm.

Cosmoline.—This valuable petroleum ointment has become a necessity to every practitioner since its introduction by E. F. Houghton & Co., of Philadelphia, and as it contains no oxydizable or organic matter capable of change by putrefaction or fermentation, it is most admirably adapted as a base for medicinal ointments. We have a great liking for the Liquid Cosmoline manufactured by this house, and use it instead of any of the oils in making carbolized oil for surgical uses.

Codman & Shurtleff.—This old-established reliable Boston house offers to the profession Vaccine Virus, which is of the best quality to the knowledge of the editors, who have used it with great success. Their Clinical Thermometers, Pneumatic Aspirating Apparatus, and Hypodermic Syringes, are all of the finest and latest patterns. Send for their catalogue.

Aloe, Hernstein & Co.—The most improved Surgical, Optical and Electrical instruments are manufactured by this St. Louis firm, and especially to our Southern and Southwestern friends we can confidently recommend their goods.

Pinus Canadensis, Kennedy's.—This celebrated mucous astringent not only holds the elevated position attained in former days, but its use increases every year. The lamented Marion Sims thought very highly of this extract, and strongly recommended its employment, especially in certain vaginal diseases.

Fellows' Hypo-Phosphites.—What physician has not used this valuable remedy in chronic cases of debility and nervousness? If there is any doctor who has not employed it in such conditions, we can confidently advise him to do so,

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and promise a satisfactory result. All druggists keep it, or a sample bottle containing 128 doses, can be obtained from Mr. Fellows, 48 Vesey, street, New York, expressage prepaid, on the payment of fifty cents. (Price $1.50.)

Maltine.—This concentrated extract of malted Barley, Wheat and Oats, maintains its high reputation, notwithstanding its many rivals. It may be procured plain, or combined with tonics and alteratives, and we have found most beneficial results from some of the latter combinations. The extract seems to assist the alterative action of a number of medicines.

Colden's Liquid Beef Tonic.—The officinal analysis of this preparation shows it to be a Liebig Extract of Beef, combined with the best Brandy, soluble Citrate of Iron, Cinchona, and Aromatics, and is successfully employed in all lowered conditions of the system, and especially in the condition of delirium tremens, where a stomach food and tonic is required, it is of great value. Sir Erasmus Wilson, of London, particularly recommends it in incipient consumption.

Parke, Davis & Co.—If there is any physician unacquainted with the excellent productions of this enterprizing Detroit firm, it certainly must be one who never reads current medical literature, as no manufacturers have so prominently placed their wares before the profession as have this house. Their lists of old standard and new remedies would fill a good sized volume, and their motto has always been, to sell nothing but pure drugs. We venture to assert that no doctor who has used their preparations has been disappointed in them. We have never heard of an instance where they failed to fulfill all that the firm claimed for them. The endeavor made by this house to place remedies on the market unprotected by trade-marks should have the sympathy and assistance of every right-minded physician. Any one interested in the newer remedies should not fail to write to them for their "Working Bulletins."

Lactopeptine is one of the invaluable drugs constituting the physician's armamentarium, and in the summer bowel troubles of children it is almost a specific. In all cases where a fat-digesting and meat-digesting medicinal article is needed, no better preparation can be found. There is hardly any medicine introduced of late years that is so universally employed.

Sharp & Dohme.—This firm deserves the patronage of Southern physicians, not only because it is the leading drug

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manufacturing house of the South, but also for the quality of all their many preparations. We can recommend anything bearing their signature.

E. Fougera & Co. make a specialty of importing the best class of foreign medical preparations, and have been extraordinarily successful in building up a trade in such goods. Everything they advertise is the best of its class.

Avena Sativa.—This comparatively new preparation, which is a concentrated tincture of common oats, is employed extensively in cases where a debilitated, nervous, or anæmic condition of the system prevails, being regarded by some practitioners as almost an antidote for the opium habit. In a late number of this journal, Dr. Wm. B. Gray speaks very highly of its value in nervous exhaustion.

Buffalo Lithia Water has come to be looked upon by the profession as one of the invaluable accessories in the treatment of scarlet fever, and has been successfully employed as a solvent of stone in the bladder. Its general action on the kidneys is gentle but thorough, and it fully merits its high reputation throughout the country.

Wm. R. Warner & Co. are known wherever the better class of remedial agents are employed, their trade-mark being *prima facie* evidence of the purity of a drug accompanied by it. The sugar coated sulphate of quinine pills from this house are always to be relied upon for prompt and full effect, and their phosphorous pills are very favorably mentioned by the English journals especially.

Listerine.—"Listerine has been used by me for one year. When first brought to my notice, I observed that it dissipated all bad odors with remarkable readiness, leaving behind it an agreeable perfume; that it promptly arrested putrefaction in organic fluids, and that active bacteria in a drop of foul urine, under the microscope, were instantly quieted when a drop of Listerine was made to run under the cover glass. These observations led me to regard it as an efficient germicide and a delightful deodorizer, and since that time I have used it almost to the total exclusion of other antiseptics. In the atomizer for nasal catarrh, as a gargle in sore throat, as an antiseptic in putrid abscess, as a mouth wash for tobacco, as a cleansing fluid for the teeth, and as a deodorizer for the hands after dissecting, it has served me well and given uniform results. One case deserves special notice.

"I had ordered Listerine as a throat wash in a case of *scarlet fever* where it did good work; but the nurse, mistaking it for another medicine, gave a *tablespoonful* to the pa-

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tient, an adult. The mistake was soon discovered, the father of the patient made haste to inform me of the situation, and no one but a physician, who has had experience with poisoning through misadventure, can appreciate the satisfaction with which I assured him that *the wash was non-poisonous*, and could do no harm. Had I used *carbolic acid*, or almost any other antiseptic, I might have had *a case of fatal poisoning on my hands*, or, at least, great trouble in antidoting the toxic drug. It is needless to say that no unpleasant symptoms followed the mistaken dose, which was given at about half-past five in the afternoon. It may have contributed to a favorable result, for the patient slept well during the following night, awakening in the morning refreshed and improved.

"Though, theoretically, Listerine ought to be of service in a zymotic affection like scarlet fever, it will not do to lay much stress upon the apparent good effect of an isolated dose, accidentally given, *but too much cannot be said in favor of an efficient antiseptic* that proves itself to be *inocuous in any dose likely to be taken through mistake.*

"Prof. E. R. Palmer, who was associated with me in this case, confirms the above statements and conclusions."—*H. A. Cottrell, M. D., Demonstrrtor of Anatomy, Medical Chemistry and Microscopy, University of Louisville.*

Our space forbids mention of other advertisers in this issue, but they will be "cared for" in an early number.

House Bill No. 38, to Regulate the Practice of Medicine and Surgery, which has passed both branches of the General Assembly, reads as follows:

"1. Be it enacted by the General Assembly of Virginia, That there shall be for this State a board of medical examiners, consisting of three members from each congressional district in the State, and two from the State at large, whose term of office shall be four years, or until their successors are appointed and qualified. The term of office of the board first appointed shall commence on the first day of January, eighteen hundred and eighty-five.

"2. The said board shall consist of men learned in medicine and surgery, and shall be appointed by the Governor on the first day of November, eighteen hundred and eighty-four, and every fourth year thereafter, from a list of names to be recommended by the Medical Society of Virginia. Vacancies occurring in such board for unexpired terms, shall be filled in the same manner. Such recommendations shall

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be by the votes of a majority present at some meeting of the said Society, and the same shall be certified to the Governor by the President and Secretary of such meeting. [The provision here requires that if the Governor fails to confirm the nominees of one meeting of the Society, then the Society is to make other nominations, all of which are to be approved by the Governor.] If any of said examiners shall cease to reside in the district for which he was appointed, it shall vacate his office.

"3. The members of said board of medical examiners shall qualify and take the usual oath of office before the county or corporation court of the county or corporation in which they shall respectively reside. The officers of said board shall be a president, vice-president, and Secretary (who shall also act as treasurer), such officers to be members of and elected by said board. The first meeting of the same shall be at Richmond, at such time as the Governor shall notify the members by mail to assemble. Subsequent regular meetings shall be at such times and places as the board may prescribe, and special meetings may be had upon the call of the president and two members; but there shall not be less than one regular meeting per annum. Five members of said board shall be a quorum; said board may organize at its first meeting, and may, at its first or any subsequent meeting, prescribe rules, regulations, and by-laws for its own proceedings and government, and for the examination of candidates for the practice of medicine and surgery by its individual members.

"4. It shall be the duty of said board, at any of its meetings, and of the individual members of said board, at any time, to examine all persons making applications to them who shall desire to commence the practice of medicine and surgery in this State. When the examination is by an individual member of the board, he shall report the result of the same to the president thereof; and when an applicant shall have passed an examination satisfactory as to proficiency before three individual members of said board, or before the board in session, the president thereof shall grant to such applicant a certificate to that effect. A fee to be prescribed by said board, but not to exceed five dollars, shall be paid to said board (through such officers or members as it may designate) by each applicant before such examination is had. In case any applicant shall fail to pass a satisfactory examination before the board or before the three individual members to whom he shall first apply, he shall not be permitted to stand any further examination within the next three

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months threafter, nor until he shall have again paid the fee prescribed as aforesaid: provided, however, no applicant shall be rejected upon his examination on account of his adherence to any particular school of medicine or system of practice, nor on account of his views as to the method of treatment and cure of diseases.

"5. The fund realized from the fees aforesaid shall be applied by the board towards its expenses, including a reasonable compensation to the president and secretary.

"6. Any person who shall obtain a certificate as aforesaid from the president of said board, shall cause his name to be registered in the clerk's office of the county or corporation court for the county or corporation in which he shall reside; and it shall be the duty of said clerk to register the name of every such person presenting such certificate together with the date thereof and the name of the president of the board, signing the same in a book kept for the purpose as a part of the records of his court, which shall also give the date of each registration, and his fee for each registration shall be one dollar, to be paid by the person whose name is registered.

"7. No person who shall commence the practice of medicine or surgery after the first day of January, 1885, shall practise as a physician or surgeon for compensation without having first obtained a certificate and caused his name to be registered as aforesaid. Any person violating the provisions of this section shall pay a fine of not less than fifty nor more than five hundred dollars for each offence, and shall be debarred from receiving any compensation for service rendered as such physician or surgeon.

"8. Any person who shall have been assessed with a license tax as a physician or surgeon by any comissioner of the revenue in this State at any time prior to the first day of January, eighteen hundred and eighty-five, shall be taken as having commenced the practice of medicine or surgery prior to that date; but any person who shall not have been so assessed shall be taken as not having commenced such practice prior to that date.

"9. Any physician or surgeon who shall commence to practise after the first day of January, eighteen hundred and eighty-five, and who shall reside in an adjoining State within ten miles of the boundary line of this State, shall be entitled to stand the examinations and receive the certificate hereinbefore provided for; and such certificate shall be registered as hereinbefore provided, in that county in this State which

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is nearest his place of residence; and such certificate and registration shall make it lawful for him to practise medicine and surgery.

"10. Nothing in this act shall be taken as including or affecting in any way the practice of dentistry, nor shall it include physicians and surgeons residing in other States and called in consultation in a special case with a physician or surgeon residing in this State; nor shall it be construed as affecting or changing in any way the laws in reference to the license tax to be paid by physicians, surgeons, and dentists."

This bill does not meet the full wishes of the Committee appointed by the Medical Society of Virginia to secure legislation on the subject; but it accomplishes so much more than no law at all, that the Committee cheerfully accepts it as the best that can just now be accomplished. A debt of gratitude that cannot be paid by honors is due to Dr. Wm. C. Dabney, of Charlottesville, Va., Chairman of the Society's Committee, for the untiring energy and skill displayed in conducting the measure through the Committees of the Legislature. He has sacrificed time and much personal expense to give success to his labors. Mr. Moon, of Albermarle county—the patron of the bill—also deserves the thanks of Virginians for his activity and watchfulness as to the measure. We learn that the Governor will present no objection to signing the bill. Hence it will devolve upon the Medical Society of Virginia, at its session next Fall, to make the nominations called for in the first section of the above act.

The Anatomy Act of Virginia.—Appended is an exact copy of the Senate Bill, introduced by Mr. Berry, which has passed both branches of the General Assembly, and is now in the hands of the Governor for his signature. It is now to be hoped that, since the Governor will scarcely fail to give the Act his endorsation, the law will be strictly enforced, so that communities will no longer be horrified by the sensational headings and exaggerated details given in the daily papers as to grave-robbing. The Virginia act, it will be observed, very closely resembles that of Pennsylvania relating to the same subject. The title is:—"A Bill to Promote Medical Science and to Protect Graves and Cemeteries from Desecration within the Commonwealth of Virginia:"

"1. *Be it enacted by the General Assembly of Virginia*, That the professors of anatomy, the professors of surgery, and the demonstrators of anatomy of the schools and colleges of this Commonwealth, which are now or may hereafter become au-

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thorized by law to teach medical science and issue diplomas, shall be, and are hereby, constituted a board for the distribution and delivery of dead human bodies, hereinafter described, to and among such persons as under the provisions of this act are entitled thereto. The Professor of Anatomy in the Medical College of Virginia, at Richmond, shall call a meeting of said board for organization at a time and place to be fixed by him within thirty days after the passage of this act. The said board shall have full power to establish rules and regulations for its government, and to appoint and remove proper officers, and shall keep full and complete minutes of the transactions; and records shall also be kept, under its direction, of all bodies received and distributed, which minutes and records shall be open at all times to the inspection of each member of said board and of any Commonwealth's attorney of any corporation within this State.

"2. All public officers, agents, servants, and all officers, agents, and servants of any and every city and other municipality, and of any and every almshouse, prison, morgue, hospital, jail, or other public institution in such cities and other municipalities having charge or control over dead human bodies required to be buried at the public expense, are hereby required to notify the said board of distribution, or such person or persons as may from time to time be designated by said board, or its duly authorized officer or agent, whenever any such body or bodies come to his or their possession, charge, or control, and shall, without fee or reward, deliver such body or bodies, and permit and suffer the said board and its agents and the physicians and surgeons from time to time designated by them, who may comply with the provisions of this act, to take and remove all such bodies to be used within this State for the advancement of medical science; but no such notice need be given, nor shall any such body be delivered, except in the case of criminals, if any person claiming to be, and satisfying the authorities in charge of said body that he or she is of kindred or is related by marriage to the deceased, shall claim the said body for burial; it shall be burried and the expense of said burial shall be a charge upon the State, county or districts as now provided by law; nor shall the notice be given or body delivered if such deceased person was a traveller who died suddenly, in which case the body shall be buried.

"3. The said board or their duly authorized agent may take and receive such bodies so delivered, as aforesaid, and shall, upon receiving them, distribute and deliver them to

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and among the schools, colleges, physicians, and surgeons aforesaid in manner following: Those bodies needed for lectures and demonstrations by the said schools and colleges, incorporated and unincorporated, shall first be supplied. The remaining bodies shall then be distributed, proportionately and equitably, preference being given to said schools and colleges; provided, however, that after the said bodies shall have been sufficiently used for the purposes of instruction, they shall be decently interred by said schools, colleges, physicians, and surgeons receiving them. Instead of receiving and delivering said bodies themselves, or through their agents or servants, the board of distribution may, from time to time, either directly or by their authorized officer or agent, designate physicians and surgeons who shall receive them, and the number which each shall receive; provided always, however, that schools and colleges, incorporated and unincorporated, and physicians or surgeons of the city where the death of the person or such persons described takes place, shall be preferred to all others; and provided, also, that for this purpose such dead body shall be subject to their order in the city where the death occurs, for a period not less than twenty-four hours.

"4. The said board may employ a carrier or carriers for the conveyance of said bodies which shall be enclosed in a desirable encasement, and carefully deposited free from public observation. Said carrier shall obtain receipt by name, or if the person be unknown, by a description, for each body delivered by him, and shall deposit such receipt with the secretary of the said board.

"5. No school, college, physician, or surgeon shall be allowed or permitted to receive any such body or bodies until a bond shall have been given to the Commonwealth by such physician or surgeon, or by or in behalf of such school or college, to be approved by the Commonwealth's attorney of the city or corporation court in and for the city or corporation in which such physician or surgeon shall reside, or in which such school or college may be situated, and to be filed in the office of the clerk of said court, which bond shall be in the penal sum of $1,000, conditioned that all such bodies which the said physician or surgeon, or the said school or college shall receive thereafter, shall be used only for the promotion of medical science within this State; and whosoever shall sell or buy such body or bodies, or in any way traffic in the same, or shall transmit or convey, said body or bodies to any place outside of this State, shall be deemed guilty of a

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misdemeanor, and shall, on conviction, be liable to a fine not exceeding $200, or be imprisoned for a time not exceeding one year.

"6. Neither the Commonwealth nor any city or municipality, nor any officer, agent, or servant thereof, shall be at any expense by reason of the delivery or distribution of any such body, but all the expenses thereof and of said board of distribution shall be paid by those receiving the bodies in such manner as may be specified by said board of distribution, or otherwise agreed upon.

"7. That any person having duties enjoined upon him by the provision of this act who shall neglect, refuse, or omit to perform the same as hereby required shall, on conviction thereof, be liable to a fine of not less than $100 nor more than $500 for each offence.

"8. If any person unlawfully disinter or displace a dead human body, or any part of a dead human body which shall have been deposited in any vault or other burial-place, he shall be deemed guilty of a felony, and shall on conviction be confined in the penitentiary for not less than five nor more than ten years.

"9. That all acts or parts of acts inconsistent with this act be, and the same is hereby, repealed.

"10. This act shall be in force from its passage."

Proposed Pharmacy Act of Virginia.—The Virginia Pharmaceutical Association deserves an immense deal of credit for the active interest it is taking through its efficient committee to secure long needed laws to protect the people from wrongs in the way of promiscuous sale of poisonous drugs. Such eminent druggists and apothecaries of this city as Messrs., T. Roberts Baker, John B. Purcell, J. H. Blair, Polk Miller, John W. Pierce are specially prominent in the movement, and their efforts cannot fail to meet the endorsation of the profession and the public at large. Mr. Dent, of Albemarle county is the patron of the bill, and succeeded in having it passed by the House of Delegates. It has gone to the Senate where it is not expected to meet with opposition, nor can we apprehend that the Governor will withold his signature.

The bill introduced in the House "to amend section 9 of chapter 311 of the Acts of Assembly of 1877-78, as amended April 7, 1879, provides that every apothecary, druggist or any other person who sells or delivers any arsenic, prussic acid, gum opium, paris green, tincture of opium, oil of bitter al-

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monds, tincture of belladonna, corosive sublimate, or any other poisonous alkaloids, shall have the word "poison" written or priuted on the label thereof, and shall note in a book to be kept by such person for that purpose, whenever he sells oil of bitter almonds, strychnine, prussic acid, and arsenic, to whom the last mentioned poisons were delivered, the date of delivery and the kind and amount of such poisons so delivered, and shall keep such books for inspection. Every apothecary, druggist, or other person, who sells or delivers any poison or poisonous substances shall have the English name of such poison or poisonous substances plainly written or printed upon a label attached to the vial, box, or parcel containing the same; and no apothecary or druggist shall sell or deliver to any person opium or its products, or other narcotic poison, without a prescription from a practicing physician; nor shall any apothecary or druggist refill any such prescription whenever the words, "This shall not be refilled," are written upon the prescription by the physician.

"Any person violating the provisions of this section shall, on conviction, be fined not less than twenty nor more than one hundred dollars; provided that the provisions of this section shall not apply to the prescriptions of regular practicing physicians, nor the dealings of one druggist with another. The act shall be in force from its passage."

While this bill does not accomplish all that is to be looked for in the future, still it accomplishes much that is needed. We shall hope to see an earnest effort to secure a competent and faithful Board of Examiners for those proposing to enter the prescription business. In this hope we know we have the sympathy of many of the leading druggists of the land.

Medical College of Virginia.—Under the caption of "A Medical College Criticized," the New York *Medical Record*, of January 12th, 1884, says editorially:

"A correspondent of *La France Médicale*, who states that he lived four years in Richmond, Va., and presumably graduated in medicine there, describes the status of medical education in that city. Richmond, he says, possesses a medical college and two hospitals. The medical students, however, do not go into the hospital wards at all, a sort of clinic being arranged for them from the dispensary and walking patients. 'After two years, no more, of questionable study, the young men leave furnished with doctors' diplomas.' The writer states that the education thus received is so im-

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perfect that the establishment of post-graduate colleges is a legitimate outcome of the demand by conscientious practitioners for more thorough clinical instruction.

"The main charges made against the Richmond college are those of slovenly teaching, short course, and incomplete clinical instruction.

"The *Southern Clinic* asserts that the condition of affairs thus described is true. We do not imagine that the Richmond Medical College is worse than a good many other second rate provincial schools. No doubt the faculty do their best with the competition for students at Washington, Baltimore, and the State University.

"None the less it is not agreeable to have the faults of our educational methods heralded in leading foreign journals. It is the penalty which the profession must pay for its long indifference to the impositions put upon it by the speculative financial bodies known as medical colleges."

We do not know who is the "correspondent of *La France Mèdicale*" referred to, nor are we familiar with the *present* status of the College. We ought to say, however, that this institution has been "glorious in *another* day." Its standard of graduation at one time was high enough, as compared with that of the leading colleges of the land. Men of eminence in the profession throughout the United States are numbered among its alumni, and Professors of more than National reputation for ability have occupied professorial chairs in the College. In some editorials relating to the College published in this journal year before last, the Senior Editor, then sole Editor, expressed views sufficient (as they were based upon facts and statements not yet denied) to persuade those in authority to make a perfect re-organization of this *State institution*, and he is still of the same opinion. Most assuredly, if the present Board of Visitors who are the presumed guardians of so important a State trust do not properly attend to their duties, and if no other power can do so, the Legislature of Virginia should enact some act which will lead to a better management than has lately existed. E.

Dr. Edward Warren, Bey.—We are pleased to see that Dr. Warren, one of our leading Virginians in Europe, has recently received new decorations for life services to humanity. He has been made "Officer of the White Cross of Italy" and "Member of the Order of Universal Samaritans of Geneva." Serving as Confederate surgeon during the civil

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war, he went to Europe after the surrender, and soon received the appointment of Surgeon-General in the Egyptian army, in which position he operated for strangulated hernia on one of the Turkish Ministry, being made Bey by the Khedive as a reward for his success. Since leaving Egypt he has taken up his residence in Paris.

Satisfactory Ending of a Libel Suit.—Some time in 1882, Dr. Donald McLean, of Michigan, was charged with criminal relations with a lady patient who had sought his medical advice, and the charge was widely published by *The Evening News*, of Detroit. As soon as possible Dr. McLean sued the newspaper for libel, and the jury gave him a verdict of $20,000 damages, the defence failing in their attempt to justify. The case was carried to the State Supreme Court, which has recently affirmed the decision of the lower court.

The charge against the doctor was so serious that he may well be congratulated on the satisfactory ending of the case, and he undoubtedly values the clearing of his name much more highly than the pecuniary consideration that accompanies the verdict.

The Remains of William Harvey—the discoverer of the circulation of the blood, were removed on St. Luke's day 1883, from the place they were depssited in 1657, and were placed in a marble sarcophagus in the church of Hempstead. Four representatives of Harvey's family and the officers and many Fellows of the Royal College of Physicians were present during the ceremony.

Honors Conferred on Medical Men.—It is reported in the London journals that the Queen has announced her intention of conferring a baronetcy upon Professor Lister. The *Medical Record* says truly: "This is a well-deserved honor, and one upon which he will be universally congratulated by the medical profession. For whatever views may be taken as to the value of Listerism proper, all will agree that Lister has been one of the main causes of the antiseptic era in modern surgery." Dr. William Bowman, who for several years has been looked upon as the leading ophthalmic surgeon of England, receives a baronetcy at the same time.

The Archives of Pedriatrics is the name of a new medical journal devoted entirely to the subject of diseases of infants and children, published in Jersey City, N. J., and edited by

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Dr. Wm. P. Watson, assisted by a large staff of collaborators. Dr. Watson has made a specialty of treating this class of diseases, and his study of the subject eminently qualifies him for the position he holds. Among the gentlemen who have promised assistance in this enterprise are such men as Drs. J. Lewis Smith, of New York; Edward Borck, of St. Louis; J. M. Keating, of Philadelphia, and James Finlayson, of Glasgow, so that there is every prospect of the journal's success. The first number appeared January 15, 1884, containing sixty.four pages, and it will be published monthly, without advertisements. Terms, $3 per annum.

The Independent Practitioner.—We feel that we must speak a word of praise for this most excellent dental journal. Although of course our practice lies entirely outside of the domain of dentistry, there is hardly one of our exchanges more carefully perused; and we take special occasion to mention the January number of the journal. The leading article by the American dentist, Dr. N. S. Jenkins, of Berlin, Germany, entitled "A Day's Practice," is one of the most readable professional papers we have met with for some time. We wish the editor, Dr. Barrett, of Buffalo, all the success he so well deserves.

Annals of Anatomy and Surgery.—We are sorry to learn that this admirable journal will not be published during the present year on account of the absence of the senior editor, Dr. Pilcher, in Europe, and the contemplated absence of his associate, Dr. Fowler. We hope the intimated promise of the renewal of the monthly next year may be fulfilled.

The Analectic is the title of a new journal which promises to be "a monthly periscopic summary of the progress of medical science." The editor is Dr. Walter S. Wells, formerly editor of *Quarterly Epitome of Medicine and Surgery*, etc., and the value of the new monthly to the busy practitioner can be easily foreseen by those who have noted the excellent editorial work performed by Dr. Wells in his former position. We wish it every success. The publishers are G. P. Putnam's Sons, New York City, and the subscription price is $2.50 per year, in advance.

The Medical Student is the name of a lately established medical monthly, designed to furnish reading matter specially adapted to the wants of medical students, and from the

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three numbers already issued, we should say that the journal would prove interesting not only to that special class, but also to many practitioners. It is edited by W. G. Mortimer, and published by him in New York City. Terms, $2 per annum.

The Æsculapian.—A new monthly journal of medicine and surgery under this title begins its life January, 1884, edited by Edward J. Bermingham, A. M., M. D., and if it fulfills the promise given by its first number, will prove to be one of the standard medical publications of the day. We gladly welcome it among our exchanges. Published by Bermingham & Co., New York City, at $2 per year, in advance.

A Monument To Dr. J. Marion Sims will unquestionably be erected. Subscriptions are coming in from all parts of the world—according to some of our exchanges. Many Southerners, we doubt not, will cotribute to the fund.

Anæsthetic Mixture.—Dr. William A. Byrd, of Quincy, Ill., (according to the *New England Medical Monthly* for January, 1884,) exhibited at the last meeting of the Tri-State Medical Society, a Hutchinson inhaler, and stated that the anæsthetic mixture he used consisted of one part of bromide of ethyl, three of chloroform and four of alcohol. He had used it in seventy-eight operations, only two of the patients vomiting.

Another Doctor Attacked by a Lunatic.—During Christmas week, while the medical staff of the New York City Insane Asylum were at dinner, one of the apparently tractable patients who was waiting on the table, suddenly seized a large carving knife and made a murderous attack upon Dr. Walsh. He came up stealthily behind the doctor and lunged at him savagely three times. Two of the cuts simply laid open the coat, vest, and shirt, but the third made a severe gash in his side, causing a flesh wound five inches in length, which, although painful, is not necessarily dangerous. The assailant was at once placed in confinement.

Death from Ether.—At a clinic at Bellevue Hofpital last month, a boy, with apparently sound lungs and heart, after remaining under the influence of this anæesthetic for about

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an hour and a half during an operation, suddenly ceased breathing, and all efforts at resuscitation proved futile.

Cholera Death Rate.—According to the best estimates so far made, over 30,000 lives were destroyed by the epidemic of cholera which ravaged Egypt during four months of 1883. This is said to be the first instance where cholera has existed to any extent, in any country, independently of a similar epidemic in India.

Medical Students in New York City.—During the month of December, 1883, nearly 1,500 students had matriculated at the three great medical colleges of New York City, besides about 100 at the post-graduate school.

Nature and Character of Inebriety.—According to a note from Dr. T. D. Crothers, of Hartford, Conn., Secretary of Committee of American Association for the Cure of Inebriates, the purpose of the appended questions is to gather the experience and observation of the profession as a basis for a more accurate scientific knowledge of the nature and character of inebriety. The results of this investigation will be sent to each one who replies to the questions, *free* when published. The subject is one that is becoming of almost vital importance to the nation—especially in the larger cities, and it becomes us, as a profession, that each one should contribute his storehouse or mite of information in furtherance of the object sought to be accomplished. Where doctors have had neither experience with, nor observation of such cases, the simple statement of that fact has something of a statistical importance, and it should be made in answer to the circular questions which follow.

(1) Can you give any facts from observation, bearing on the heredity of inebriety, particularly as to the presence of insanity, epilepsy, phthisis, inebriety, or other neurosis in the parents or relatives of inebriates? Give cases with histories if possible.

(2) Can you give any history of inebriates whose drinking dated from or was influenced by head injuries, sunstroke, syphilis; or could be traced to mental shock, disease or injury of any kind; also to overwork, nervous exhaustion, anæmia, and any specific causes which broke down or injured the system?

(3) Have you seen any cases in which insanity or epilepsy either preceded or followed inebriety? If so, was it traced

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to the use of alcohol alone or was it due in part, or in whole, to some inherited or acquired diathesis?

(4) Have you noted any distinction between the different forms of inebriety, such as irregular, continuous, or periodical inebriety? State any facts you have noticed which relate to the periods and forms of drinking?

(5) What particular mental and physical change have you noticed concerning the character and general health of the inebriate, that would suggest the idea of disease and the need of physical care and treatment?

(6) Have you noticed any form or condition of inebriety that seems to be produced or is largely influenced by the kind of alcoholic drink used, or the work engaged in, or the food or climate, or any other unsanitary surroundings?

Illustrative cases concerning any of these inquiries will be welcome, and a full expression of opinion from observation and experience is urgently requested.

Some of the Delay in the issue of this January number has been due to the fact that the printing office of Messrs. J. W. Fergusson & Son, where our printing is done, was injured by fire, requiring repairs to the engine, etc. Fortunately none of the manuscripts or other papers were injured. The damage done has now been fully repaired.

Richmond Eye, Ear, and Throat Infirmary.—From the annual reports of the Lady Managers, of the Surgeon in Charge, and of the Treasurer of this charitable institution presented to the recent annual meeting of the Board of Trustees, we learn that 613 patients received treatment during the year 1883. These patients made 4,018 visits to the Infirmary. Since the commencement of the institution, there have been 401 in-door patients. There have been 46 cataract extractions, with but one failure. A small balance remains in the hands of the Treasurer. The Board instructed its President, Dr. John G. Skelton, to petition the City Council to continue the small appropriation needed to pay the house rent, as the institution could not be carried on without this help. Dr. Skelton was re-elected President of the Board of Trustees, and the Board elected the following Attending Medical Staff: Drs. Joseph A. White, Senior Surgeon, Phil. Taylor, Charles M. Shields, and A. C. Palmer. Consulting Physicians: Drs. R. T. Coleman and J. B. McCaw. Consulting Surgeon, Dr. George Ben. Johnston.

No one who has witnessed the development and growth

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of this charitable institution can deny its value to those who are in reduced pecuniary circumstances and who need medical or surgical attention for eye, ear or throat troubles. All credit is due to the Senior Surgeon, Dr. Joseph A. White, for founding this Infirmary, and to him is practically due the credit also of providing for its financial support. His professional ability in the line of his specialty is recognized by all who have watched his diagnoses and who have seen him operate. He has associated with him, on the medical staff, other gentlemen who are coming to the front rank. We trust that our "City Fathers" will grant the help asked for from the city of Richmond.

Obituary Record.

Dr. Thomas Story Kirkbride, Superintendent of the Pennsylvania Hospital for the Insane, died at his home in Philadelphia, December 17th, 1883. He was born near Morrisville, Pa,, July 17th, 1809; hence he was in the 75th year of his age. His health had been feeble for about four years. His paternal ancestors came to America with William Penn. He graduated at the Medical Department of the University of Pennsylvania in 1832, and, during the same year, became Resident Physician to the Friends' Asylum for the Insane, near Frankford. A year later he was elected to the same office in Pennsylvania Hospital, which he held for two years. In 1840 he was elected Superintendent of the Pennsylvania Hospital for the Insane—now generally known as "Kirkbride's Hospital"—which position he held till his death. In 1866 he was specially active in the organization, and was the first President of the Association of the Medical Superintendents of the Insane Hospitals of America. The office he held for eight years. He was a member—both active and honorary—of a large number of scientific organizations. Besides contributing a large number of papers to different medical journals, he was the author of a work on "The Construction, Organization and General Arrangements of Hospitals for the Insane," and also of a work on "Rules for the Government of those Employed in the Care of the Insane"—both standard publications to this day. Firm in his beliefs, he was pronounced in all of his convictions; but at the same time he was modest and retiring, although social in his temperament and genial in his deportment. This country has lost a great and good man in the death of Dr. Kirkbride, who ever kept an eye to the relief of the afflicted.

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Original Communications.

ART. I.—**The Obstetric Forceps.*** By THOMAS J. MOORE, M. D. Richmond, Va.

In preparing a paper upon a subject which has been so generally canvassed, I have felt somewhat at a loss to determine in what manner it could be treated in order to prove most interesting to my audience. In the commencement of this paper, I will state that, assuming the laws and mechanism of uncomplicated labor to be well understood, I will endeavor to spare you as much dry detail as possible.

The process of labor is one of the grandest exhibits of vital mechanics: and its consummation is the resultant of those laws acting reciprocally and in combination the one with the other. In conditions of high physiological attainment, it is accomplished with but slight physical tare upon the mother; while, on the other hand, when the enervating surroundings of a high order of civilization have produced their effects for generations upon society, it often becomes exhaustive and difficult in the extreme. The savage mother of the plains undergoes much hardship, oft suffering from want and privation from childhood to old age; but she is happy in being in every way capable of meeting nature's demands so far as gestation and parturition are concerned.

With her civilized sister it is far different. Many are the

*Read before the Richmond Academy of Medicine, January 21st, 1884.

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obstacles that lie within her path, undergoing labor difficult, protracted and sometimes impossible without the intervention of art. Under these conditions, the forceps frequently become indispensable—affording the highest order of relief to both mother and child.

The use of forceps has been growing in favor from the time of their invention by Chamberlin during the first half of the seventeenth century, down to the present day. By no means, however, has this been constant and regular; for like the major portions of new suggestions in medical science, it was received at first with much hesitation, and it was not until about the middle of the eighteenth century when Smellie, of England, and Leveret, of France, acting almost simultaneously in their respective countries, gave to the forceps the pelvic curve and called the attention of the profession to its value in certain cases of obstructed labor. They by no means comprehended its true value, nor the extent to which it could be employed in the direction of genuine conservatism. On the contrary, they looked upon it as an instrument to be applied only in rare cases of the most formidable kind. Its general application to the wide field in which it is now used was beyond their line of conception. Hunter, Clarke, Osborne, Collins and Denman, following in the wake of Smellie, enlarged, to some extent the application of the forceps; but they also held it as an instrument of reserve to be used on rare and extreme occasions, often resorting to a bloody operation from a misconception of the power of the forceps to overcome certain obstacles in deformed pelvis, and malposition of the fœtal head. As an evidence of the infrequency of its use, Clarke applied the forceps but once in 742 cases; Collins, once in 617. After these gentlemen, came a more advanced school of obstetricians, both in this country and Great Britain, who in their writings advocated a more extended use of the forceps. Yet I doubt if they practically carried out their teachings; for while Ramsbotham, Dewees, Rigby, Meigs, Hodge, Churchill, and others, were eloquent and forcible in sounding the praises of the forceps, they appear to have employed it but slightly more often than their illustrious predecessors in the field.

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To Dr. John Beatty, of Dublin, is due the distinction of revolutionizing the opinion of the profession in regard to the forceps. He robbed it of its seeming dangers, and established for it a conservative character. He demonstrated by statistics, furnished in an article written by him in 1829, that, judiciously applied, the forceps was not only beneficial to the mother and child, but it frequently saved the life of the one or the other, as the case might be—sometimes of both. He endeavored to convince the profession that more was to be feared from prolonged labor than the use of forceps; that many of the ills of child-birth and lying-in could be avoided by an early application of the forceps, and that many of the results attributed to the use of it, arose from other causes incident to parturition, or from want of appreciation of the necessity for its early application.

While his teachings did not immediately affect his cotemporaries, they in time, bore their legitimate fruit; for we find Shekelton from 1847 to 1854, in the Rotunda Hospital, Dublin, applying the forceps once in every 62 of the 13,748 deliveries. Many writers since 1854, have urged an early resort to the forceps in retarded, as well as obstructed labor —notably Sir Jas. Y. Simpson, Hardie, of Manchester, Dr. Geo. Johnston, Profs. Barker and Isaac Taylor, and others on both sides of the Atlantic.

The tendency of the hour is to carry the modern teachings upon this subject to an extreme; at least the advocacy of the frequent application of the forceps is decidedly startling to those minds which are cast in a somewhat conservative mould. We find Dr. George Johnston, of Dublin, in the Rotunda Lying-in Hospital, in some 7,000 deliveries using the forceps once in eleven times; in the last year of his service he used it once in every nine deliveries. (*Report of Rotunda Lying-in Hospital, from Nov.*, 1868, *to Nov.*, 1875.)

Prof. Barker recommends in an address before the Academy of Medicine of New York, Oct., 1878, the employment of the forceps to a degree of frequency beyond any report upon the subject that we have seen from any of our American writers. He states that during the past twenty-five years in private practice his average for the use of the forceps has

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been one in every fifteen cases, and during the past ten years he has resorted to it once in every twelve of his labors. Judging from the general tenor of his article, he appears to have rather regretted not having applied it at an earlier period in labor, upon the ground that it generally protects the soft parts of the mother from injury arising from pressure, with its train of attendant evils; and, instead of its application threatening the integrity of the perineum, he considers it the frequent means of preventing laceration.

While I am by no means prepared to recommend so heroic an application of the forceps as the figures of Drs. Johnston and Barker suggest, still I feel assured that the profession throughout the country have not used this instrument with the degree of frequency necessary to afford the greatest relief to mother and child. Surroundings and social conditions, I have not the least doubt determine quite often the necessity for its use—sometimes undue apprehension upon the part of the accoucheur that the labor may prove protracted to the mother (not to speak of himself). The welfare of the child must, of course, always be looked after. I doubt if the time has yet arrived when the enervating influence of civilization has caused the physique of American women to undergo a deterioration so great as to render them incapable of performing the functional requirements incident to labor, without this frequent intervention of art. Possibly this state of affairs may exist in a few of our largest cities, but let us hope the day is far distant when this condition will be found the rule throughout the country.

Should American women ever reach this state of physical degeneracy, it will afford proof of a most conclusive and convincing character that the doom of the race is as fixedly sealed as the consummation of time itself, and some other people bearing the impression of a nearer relation to primeval time will step forward and take our place.

In regard to the particular kind of forceps in use at the present time, and the advantages possessed over the inventions of the past, I will not attempt a discussion, as the subject is familiar to all of you. The original straight forceps of Chamberlin has been improved until it has become of

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great delicacy and perfection. The one I show you to-night is made by Codman & Shurtleff, of Boston, after the pattern of the Sawyer forceps, and is, I believe, equal to any at present in use. Owing to the thinness of its blades and character of their finish, cephalic curve, shortness of shank and the ease with which they are locked (being the latest improvement of the Smellie lock), it is exceedingly easy of application, and produces the minimum amount of distention possible to the perineum, and of the vulvar orifice. In fact when the compression incident to traction is produced, the increase of distention is virtually neutralized. The bi-parietal diameter of the fœtal head is capable, without injury to the fœtus, of a half-inch of compression in consequence. When not more than half this diminution takes place during traction, any distention that existed from application of the forceps is overcome. This instrument can only be used when the cephalic extremity is very low down in the excavation, or presenting at the inferior strait, as a want of the pelvic curve, peculiar to the long forceps, renders it incapable of being properly applied; besides, the resistance of the perineum would prevent traction being made in the proper direction, that is, downwards and backwards whenever the presentation is above the point afore mentioned. In the great majority of cases, however, where forceps become necessary, this is the instrument which will meet every demand; for, if the statistics in regard to delivery are correct, as reported by the various authors, in the vast majority of cases when the application of the forceps is required, the head is usually found presenting at the inferior strait or lying immediately upon a distended perineum. One author gives the proportion of this class of cases to that of all others requiring the aid of the forceps as 90 per cent.

As to the long forceps, all of them are more or less modifications of Smellie and Leveret: those used in America are generally more after the pattern of Simpson, of Edinburg, and were introduced into this country by Dr. Bedford, of New York.

The forceps shown to-night is Prof. Geo. R. Ellliot's modification of the last mentioned; and for beauty of finish,

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delicacy of mechanism as well as possessing the requisite strength, it is unsurpassed by any instrument at present in this country. It possesses the additional advantage of having a mill head screw at the end of the handles, by which their compressing power may be regulated. It is the counterpart of what is known as the Miller forceps of England—the two instruments appearing about the same time. This instrument can be generally used in meeting all of the demands for forceps applications. It is capable of being applied any where from above the superior strait to to the floor of the perineum.

In the high operations, where the head is above the superior strait, or is lodged high up in the excavation, the forceps of Prof. Tarnier, of France, as modified by some of our American accoucheurs—Grainger of Boston, Lusk of New York, and others—is becoming popularized. It differs from the ordinary long forceps in having the blades well set back by a posterior curve, and in having two rods attached posteriorly to the blades, joined below in a common handle, and in having a to and-fro motion. When applied the traction is made with the rods in the direction of the axis of the superior strait, and as the head descends, the handles of the instrument rise, indicating the direction in which traction should be continued; there is also a cross screw at the handles, by which compression of the head is regulated. Prof. Tarnier asserts that this is the only instrument yet invented by which traction can be made in the line of the axis of the superior strait; that all other of the long forceps exercise traction in a line forward to the axis, and, consequently, cause the head to be pulled too far anteriorly, jamming it, as it were, against the pubis. The instrument is not more difficult to apply than other long forceps, is capable of overcoming greater obstacles, and, owing to one's ability to regulate compression when properly applied, will permit the head to rotate as it descends. The chief difficulty in its use consists in its proper manipulation after being applied; and, without experience in the matter, I should think might prove dangerous to the integrity of the soft parts of the mother. This instrument has been practically tested by Poof. Barker who speaks of it in terms of commendation.

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Rules for Applying the Forceps.—The bladder having been emptied, the patient should be placed transversely in the bed, with the buttocks well down to its edge—she being in a supine position as practiced in Germany, France, and America, in preference to the English plan of placing her upon one of her sides. An anæsthetic—preferably chloroform—should usually be given to the surgical degree in all high operations; the waters are expected to have escaped, and the neck of the uterus must be fully dilated or partially and easily dilatable. The cephalic extremity in some one of its parts must present—never the breech. The forceps however may be applied to the after coming head, in breech presentations, when required. The blade of the forceps which is most difficult to apply is to be the one first introduced. This is generally the posterior, but the rule is by no means absolute. After the anterior blade is applied, the instrument is to be locked *without force*. This is imperative, and when the blades cannot be brought into a proper position for locking, rectification must be made prior to another attempt. As the requirements demand, the fingers or hand not occupied in holding the blade to be introduced, must serve as a guide and act as a protector to the soft parts of both mother and child. When possible, the forceps are to be applied to the sides of the child's head, with the anterior curvature looking towards that part of the head which is to be brought under the symphysis pubis. Prior to traction, it must be ascertained that the soft parts are in no way caught by any part of the instrument. The traction must always be made in the direction of the axis of the straits, as the head descends —first, in that of the superior, and when the presenting part reaches the inferior, then in the axis of that strait. The traction should be moderate in force—never violent—and a limited lateral motion may also be used in connection with the traction. The hand not used in making the traction must serve as a guide and, in high operations, in offering a point of resistance on the shanks, so as to give the tractive force a backward and downward direction. Traction should be made during a pain, unless there is inertia of the womb, when the intervals of traction should extend over a time,

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corresponding to the usual intervals of pain, the element of time is important, and when the head is high up in the excavation, or is engaged at the superior strait, from half to three quarters of an hour should be occupied in bringing it down to the floor of the perineum. When the latter has become fully distended, and the head is presenting at the vulva, which is also becoming tense, all traction should cease, and the forceps used simply as a director, or it may be removed and labor allowed to proceed in a natural manner, or the finger may be introduced within the rectum, and extention encouraged, as well as affording protection to the perineum by bringing it forward.

The application of the forceps in vertex positions, when the vertex presents at the inferior strait, must be in compliance with the rules heretofore laid down, remembering to place the blades properly upon the sides of the head, and the concavity of the long forceps, when used, looking in the direction of the presenting part, which is to engage under the symphysis pubis. The traction is then to be made forward and downward until the floor of the perineum is reached, when the forceps is to be gradually elevated until extension is complete.

When the occiput has passed into the hollow of the sacrum, or presents at the posterior extremity of either oblique diameter, the forceps should be applied with the concavity looking forward, notwithstanding the fact that we hope for the ultimate rotation of the occiput forward—this even being accomplished after the head is well down upon the floor of the perineum. Should rotation commence, and the concavity of the forceps look towards one of the extremities of the transverse diameter, it is better to remove the anterior blade, and use the posterior as a lever or director. After the rotation is complete, or the occiput has passed sufficiently far forward to admit of the reapplication of the forceps in proper direction, it can be replaced and the delivery perfected.

In all of the presentations at the inferior strait, it is generally preferable to use the short forceps whenever it is practicable; for in this way we avoid the annoyance that sometimes pertains to the pelvic curvature of the long instrument.

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Where we find the occiput will not rotate, we direct the forceps so as to bring the occiput to the anterior perineal commissure; this is done by slightly elevating the handles as we are making traction. After the occiput has cleared the commissure, further assistance may be required to complete the delivery of the head; this is done by depressing the the handles towards the anus.

When the vertex has merely engaged at the superior strait, or lies high up in the excavation, application of the forceps is rendered decidedly more difficult, and we cannot usually observe the law, heretofore laid down, of applying the forceps to the side of the child's head. It is to be applied so as to correspond with the curve of the excavation, its concavity invariably looking forward; the traction is to be made downward and backward, until the head is brought to the inferior strait. Usually in well adjusted forceps, the head will rotate into the position within the blades as it descends; this is especially the case when the forceps of M. Tarnier is used. Where the head is well up in the excavation, and in the posterior positions, the effort at rotation of the occiput forward will sometimes turn the forceps so that its concavity looks more or less to one side. When this is the case remove the anterior blade, and use the posterior as an aid to rotation. After the latter is complete, re-apply the forceps. Fortunately in forceps delivery in these cases, the effect at rotation is not usually made until the head is at the inferior strait, or rests upon the floor of the perineum, when removal and reapplication are comparatively easy. Here the short can often be substituted for the long forceps.

In the face presentations, where the face is engaged at the superior strait, it will always be well to attempt cephalic version; and when in the mento-posterior positions, failing in this, podalic version when practicable should be tried.

In the anterior positions, there is nothing unusual to be remarked concerning the application of the instrument. But in the posterior positions, after the face has descended well into the excavation, the spontaneous delivery of the the child is impossible, unless the chin rotates to the front.

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Here the forceps can render most valuable aid. Apply it to the sides of the head, and, by depressing the handles well backwards, endeavor to convert the face to a vertex position. Failing in this, attempt to bring the chin to the front by rotation; for while this may kill the child, yet as the position above described renders the completion of labor impossible, it is better to do this than to resort to a bloody operation. Where the head remains after the body has been expelled, manipulation is usually sufficient to accomplish its delivery; when the forceps is to be used, it should, as a rule, be appliep upon the stunal side of the child—the instrument being applied, if the head is high in the pelvis, in a direction with its curvature, and its concavity looking forward, seizing the head of the child as best you can. When low use the short forceps, and then you can apply it in a manner adapted to the presenting part.

In the occipito-sacral position, with the head extended, and chin separated from the chest, the forceps had best be applied upon the dorsal side of the child, and traction made so as to bring the occiput forward and downward. When flexion is accomplished, slightly depress the handles and complete the delivery.

When the head or face presents, and is movable above the superior strait, it is always best, where accidents of any kind occur demanding the speedy termination of labor, to resort to podalic version. Should the latter prove impracticable, as when the waters have early escaped and the uterus is so firmly contracted upon the fœtus as to render not only version, but even the introduction of the hand within the womb impossible, there is nothing left us, provided the antero-posterior diameter of the superior strait measures three inches, but to apply the forceps and attempt delivery. This contraction of the uterus materially aids in so fixing the fœtus at the superior strait as to render the application of the instrument to the fœtal extremity less hazardous, both to the mother and child. For, where the head is movable above the strait, we are not only completely in the dark in regard to the part of the head we will succeed in embracing within the blades, but the instrument is exceedingly liable to slip,

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and may in this way injure the soft parts of both mother and child. Besides, the manner in which traction is to be made in order to preserve the integrity of the soft parts of the mother and prevent after complications, is so far downwards and backwards as to render it impossible to observe the proper line with the ordinary forceps; and even with those of the most improved pattern the hazard is greater than would be ordinarily justifiable where turning was at all practicable.

Pelvic Deformities with Contractions.—Much discussion has arisen amongst the various authors on obstetrics as to what is best to be done under the above conditions, and varied have been the reported experiences upon this subject—one school preferring the forceps, the other the turning. At the present time it would almost be considered criminal upon the part of the *accoucheur* if he did not make an examination to satisfy himself in regard to the condition of the parts to be involved in the labor, especially where he may have reason to question the capacity of the pelvis. When this duty has been properly performed, many of the evils that would almost inevitably occur may be prevented by anticipating impending danger, and by being promptly on hand at the commencement of labor. When one is called sufficiently early in a case of contracted pelvis at the superior strait, when the conjugate diameter is not less than three inches, the question to be determined is whether it is better to perform pelvic version or apply forceps. Unless the head is so firmly engaged as to make it impossible to push it up, and render it movable, or unless the waters have escaped and the uterus has become firmly contracted upon the fœtus, for the reasons previously cited when treating of emergencies arising where the head or face was above the superior strait, it is better to perform podalic version. The argument offered by those who prefer the forceps is that it acts as a compressor, is capable of naturally diminishing the size of the head, and its application is therefore better adapted to meet the requirements of this complication. Granting that the forceps is capable of a certain amount of compression when properly adjusted to the head, that the bi parietal di-

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ameter has been known to be reduced in length half an inch, is it always safe to attempt to use the instrument as a compressor so high up? Where the contraction is located at the transverse diameter of the inferior strait, with deformity and angulation of the same, its use is often most valuable as a compressor; but here the force can be regulated and attendant dangers avoided. While at the superior strait, it is exceptionally rare that the forceps can seize the head in a favorable position to produce compression, as it must be applied in the axis of the strait; and generally in conjugate contraction the long diameter of the presenting part lies coincident with the transverse diameter of the upper strait; and when the forceps is applied, if compression is made at all, it is in the direction of the antero-posterior diameters of the fœtal head, instead of the transverse (bi-parietal), where the compression is needed. The force thus generated would prove a positive hindrance instead of an aid, in passing the head through the constriction. The idea has been advanced that after a tedious first stage of from 24 to 60 hours duration, the cephalic extremity has been forced beyond the obstruction, where the conjugate diameter was only two and and three-fourths inches. Therefore the forceps, as a compressor, ought to be able to draw the head through an equally contracted space.

Sudden and great compression of the head is dangerous at any time and place. The brain of the child is capable of enduring great pressure, and its skull great compression, when slowly, gradually, evenly and firmly applied, as we all see in the moulding of the child's head in long and tedious labors—the head adapting itself in shape to offer the least resistance to the parts of the mother. Far otherwise would it be if one-half of the force required to thus mould the head was suddenly applied; in the great majority of cases it would at once prove fatal to the child, either by fracture of the bones, their sudden indentation, their overlapping to too great an extent, by compression rupturing a blood-vessel; but above all, by what usually takes place, direct sudden compression of the brain itself.

Again, in contracted pelvis at the superior strait, when the

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head presents, it offers itself as a cone-shaped body to pass an obstruction with its base—the bi-parietal diameter offering first, and therefore encountering the resistance. The bones of the head being elastic, each uterine contraction has a tendency to increase the bi-parietal diameter—thus rendering the obstacle to be overcome greater during each contraction. Far different is the condition where version has been resorted to, and the head is engaging at the superior strait, for then we have the bi-mastoid diameter presenting to the contracted part of the pelvis. The cone is now inverted, and as the bi-mastoid diameter is from one-half to three-quarters of an inch less than the bi-parietal, we have the head offering in a much more favorable position, and requiring less force than when presenting in the contrary direction.

Again, the statistics as offered by Madame La Chapelle are convincing beyond cavil upon this subject. In fifteen deliveries by her with forceps, where the pelvis was contracted, of the children eight died, seven survived; of twenty-five children delivered by the feet, ten died, fifteen survived. Taking this statement as legitimate data upon which to base a calculation, we have two-thirds of the children surviving version, while a little more than one-half are lost when delivered by forceps. The objection offered by Cazeau, of the possible arrest of the head at the superior strait in breech deliveries, with its extension, and the danger arising from over-stretching of the cervical region, together with the compression of the umbilical cord, from the delay in the delivery is more than counterbalanced by the dangerous complications that lie in the other direction.

In deformities of the pelvis at the inferior strait, especially where we have shortening in the bi-ischiatic diameter, with deflections and angulations of the rami, the best results are also obtained from version; for when the head reaches the inferior strait, the back of the neck will engage under the pubic arch, and in this way the most favorable condition is offered for the head to undergo flexion and delivery. Besides, in all podalic cases, the forceps can be used as an aid to any place where the head becomes fixed, from its superior

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strait to its escape from the vulva—the instrument increasing in ease of application and efficiency just in proportion to the descent of the head towards the outlet.

In concluding this part of my paper I would say, whenever the fœtus presents above the superior strait, is movable, with the uterine neck dilated or easily dilatable, and the uterus is free from tetanic contraction, perform version of some kind—cephalic when you have a face or irregular head presentation, when admissible; if not, then the podalic; and in all trunk presentations, presentation of a hand, a foot, etc., and in contracted pelvis where the conjugate diameter is from two and three-quarter inches to three inches, perform the last mentioned kind of version.

The above rules also apply when accidents of any kind occur involving the life of either mother or child, or of both, as convulsions, ante-partum hæmorrhage, exhaustion from prolonged labor in the first stage, etc., and where delivery is at once demanded. Dr. R. Davis, Dr. Eshleman, of Philadelphia, and others, have recommended the application of the forceps in preference to turning in hæmorrhage from placenta prævia; but I feel assured that the converse should be the rule. Whenever you have hæmorrhage from the implantation of the placenta in the lower segment of the uterus, it is necessary that the os be either dilated or dilatable, in order to apply the forceps. In either of these conditions, when this instrument can be used, the hand by proper manœuvering can also be made to enter the cavity of the uterus, and without dangerous delay. The partial separation of the membranes is indispensable in both operations. As the hand advances in the latter, the operator separates the membrane as he goes, and he can now perform version with but slight additional manœuvering—the hand not being withdrawn until the operation is performed. In applying the forceps, while the hand may not be required to enter the cavity of the uterus, two or more fingers must enter in order to properly detach some portion of the placenta, and then the fingers must so manœuver as to act as the guide for both blades, and more difficult still, to keep the placenta to one side and clear of the instrument. When this has all been

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accomplished, quite as much shock will have been inflicted, if not more, than when the whole hand has been introduced.

Again, we are not usually called to interfere until there has been more or less hæmorrhage, which materially conduces, from its relaxing effect, to the dilatability of the os uteri. A reason more cogent for preferring the version in these cases, is that so soon as you have accomplished the turning, and brought the feet within the neck, the latter, acting as a uterine excitant, will prevent a further escape of blood, and the labor may be allowed generally to proceed without further intervention. For, as the labor progresses, and as the other parts of the child engage in the os, they will keep the uterus in a state of such contraction as to prevent additional hæmorrhage until the fœtus is expelled; while, if the forceps had been used, the rapid emptying of the uterus might have produced a state of inertia which could not at once have been overcome, and thus the life of the mother would be jeopardized from the excessive loss of blood.

In regard to the use of the forceps, where the resistance of the soft parts offers the chief obstacle to labor, there are two conditions to which I wish your attention called. The first is where the head lies high up in the excavation and entirely within the uterus, the waters having escaped, and the mother is growing restless, apprehensive and weary, the head has been lying down upon the neck just within the os externum for some hours without being able to accomplish necessary dilation; the os is partially dilated, and by manipulation with one or more fingers is capable of being dilated to two thirds of the extent required for the passage of the child's head. Here, after dilating the os to the extent and in the manner above described, apply the forceps, being careful in no way to involve the soft parts; and then by gentle and slow traction you will be able to deliver the child, saving the mother hours of suffering as well as the infant the risk of being born asphyxiated. So soon as the condition is positively ascertained, the accoucheur should at once interfere and deliver, never being governed by any formulated set of rules as to the number of hours that should be permitted to elapse before interference should be considered justifiable.

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The other condition is when the head has descended to the floor of the perineum, and apparently is retained by the resistance of the perineal muscles. Here the head will frequently remain for hours without advancing, and despite all efforts of the uterus, aided by the voluntary efforts of the mother—the obstacle remaining the same—instrumental interference will be required to accomplish the delivery. The impression is generally prevalent, that it is simply the rigidity of the perineal muscles that thus retards the labor. It is rather attributable to the peculiar direction in which the force is applied to the head of the child. The head in descending remains in a flexed condition until it impinges upon the floor of the perineum, at which time it becomes necessary, in order to complete the labor, that extension should begin. When this condition of flexion is, by accident, somewhat increased, and the force is applied in the usual way, one can readily conceive how an exaggerated condition of flexion is induced, where nature intended the opposite result to be accomplished. If this is not the sole cause of bringing about this condition of affairs, it certainly is the most important factor.

These are the cases where forceps can be applied with great ease to the accoucheur, with but slight pain to the mother, and, if the delicate short forceps I showed you in the early part of the evening is used, neither the integrity of the soft parts of the mother should be in any way compromised, nor the head of the child injured. The latter assertion I expect to be caviled at, so far as it relates to the soft parts of the mother; but I am firmly convinced that laceration of the perineum more often follows protracted, obstructed labor, overdistending the perineum than from the application of the forceps; and I do not exaggerate when I state that nine out of every ten cases requiring the application of the forceps, is after the head has reached the floor of the perineum, and not until then. It is for this reason, that general practitioners should learn how to apply the forceps, and thus afford relief, which is quite often needed at their hands to women in the throes of labor—leaving the higher operations which require an educated touch, and great deli-

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cacy of manipulation to those endowed with eminent surgical skill. The forceps can be applied at the floor of the perineum generally without materially altering the position of the woman in bed, and the use of an anæsthetic is but rarely required. Should difficulties be encountered, change the patient to the forceps position, administer your anæsthetic, and proceed in the manner heretofore described.

When to interfere in cases of labor is the great question to determine. Labor is a natural, a physiological process, and, within certain limitations, nature should always be permitted to perform her functions undisturbed. Beyond these limitations, a large class of females demand *this* intervention upon our part. There is an error about instrumental delivery, which I believe is rapidly disappearing—the attributing the various complications of the lying-in, and the accidents that follow after instrumental delivery, to the use of the forceps. Puerperal fever, peritonitis, pelvic cellulitis, metritis, laceration of the neck of the uterus, vesico-vaginal and recto-vaginal fistulæ, thrombus of the vulva, etc., are all much more likely to be produced by prolonged tedious labor than by the timely use of the forceps.

There is no absolute rule to govern one in regard to the special time that the forceps should be applied—the different stages of labor, presenting different requirements. In the first stage, if the pelvis is relatively normal in dimensions, and there are no accidents requiring immediate delivery, *non*-interference should be the rule. On the other hand, after the second stage has begun, whenever the accoucheur becomes satisfied that the labor will not progress without the application of the forceps, it should be done at once. To determine this condition may require but the lapse of a few minutes, or it may require several hours. But never let the life of the mother or the child be placed in jeopardy from an over sensative conservitism. Timidity upon the part of the accoucheur, "the watch and wait policy," the permitting nature to take her course plan, have done more harm to the mother and child than we are capable at the present time of appreciating. It remains for the physician of the future, by the careful study of properly prepared statistical tables, em-

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bracing the durations of a large number of labors, the complications that accompanied and ensued from the application of the forceps, with relief afforded mother and child, compared with those cases under like conditions *where* nature was permitted to take her own course, to compile anything like definite data. This day is not far distant, and let us hope that those who are in practice when it comes will recognize the well merited victory which the forceps, as a conservative instrument, will have won.

ART. II.—**Chronic Catarrhal Inflammation of the Nasal Passages.*** By P. W. LOGAN, M. D., Knoxville, Tenn.

In the paper which I now offer for your consideration, I shall briefly review some of the methods of treating chronic nasal catarrh. Its pathology I will not specially discuss. Its symptoms, however, are so varied, numerous, and peculiar, that I think they should be studied with minuteness and accuracy.

As almost every one is more or less affected with catarrhal trouble, or trouble arising from a catarrhal condition of the upper air passages, it is important that we should be familiar with every symptom resulting therefrom.

Chronic catarrhal inflammation of the mucous membrane covering the nasal passages may, by continuity of surface, invade the frontal sinus, the ethmoidal sinus, and sphenoidal sinus, giving rise to frontal headache, pain on top of the head, in the occipital region and posterior part of the neck and shoulders. Many headaches, facial neuralgias and supposed cases of rheumatic and neuralgic troubles occurring in the region of the neck and shoulders, are due, in many instances, to, and dependent upon, the presence of a chronic nasal or pharyngeal catarrh. Chronic follicular pharyngitis, enlarged tonsils, and the great majority of middle ear troubles are due proximally to chronic nasal catarrh, the inflammation having extended to these structures. Supposed laryngeal trouble and loss of voice is frequently due, through reflex influence,

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to this affection; annoying cough, which is often pronounced bronchial trouble, is likewise due to it. Asthmatic trouble is frequently due to nasal catarrh, the irritation having extended to the smaller bronchi and affected the nerves encircling the smaller air passages, causing them to contract spasmodically, constituting asthma. A painful condition of the arm, most commonly the left, is sometimes a symptom of catarrh—this condition being transmitted through the facial nerve, which has connection with the fourth cervical, and this with the nerve of Wrisburg. Dyspepsia and constipation is a common and frequent concomitant and result of chronic nasal catarrh, from the fact that many of the nerves that pass through the naso pharyngeal cavity are distributed to the stomach. Palpitation of the heart is an important symptom or accompaniment of this disease.

Again, the brain is sometimes affected to such an extent that the sufferer is unable to labor mentally without an aggravation of his symptoms. His mental effort is of short duration from the fact that protracted mental effort is attended with headache or other uncomfortable sensation about the head, and inability to think consecutively or to retain that which is read. I had a catarrhal patient to describe the condition of his mind as being like a sieve, saying that he could not retain what he read. This patient was a lawyer of fine physique, good general health, but an immoderate smoker.

Many catarrhal patients are forgetful. Epilepsy and insanity have been attributed to catarrh. The habit of dropping little articles that one may be handling, such as pencils, pins, cuff-buttons, and other articles, is now and then noticed in catarrhal patients. They seem to drop these articles upon the same principle that they drop an idea—forgetting that they hold the article in their fingers. This symptom I have never seen reported by any authority; but having myself been frequently vexed and annoyed by dropping little articles, and having been a great sufferer from catarrh, I was led to inquire of other patients whether they were inclined to drop various articles that they might be handling also, and I have met with many who were similarly affected. An unusual amount of peevishness and fretfulness, with a great tendency

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to cry in cases of little children, is present in some cases. I have met with some remarkable cases of this kind, and I assure you that their condition was pitiable indeed. Arrest of growth and development of the upper jaw is another symptom or accompaniment of chronic nasal catarrh, but of rare occurrence.

Again, I find a great many catarrhal patients—in fact, almost all—who have, to a greater or less degree, muscular rheumatism. My *rationale* for this, however, is that changes in the weather give rise to the accompanying rheumatic trouble.

Catarrhal patients are morbidly sensitive to changes of the weather, and take cold very easily. Indeed, to lessen the predisposition on the part of the patient to take cold, is one of the great desiderata to be accomplished.

The internal administration of quinine and other tonics, with diuretics, laxatives, and the proper local treatment, will improve the condition of the patient to such an extent as to lessen his liability to take cold. As he improves, his power of resistance increases; he therefore takes cold less frequently, After the patient has reached this point it is important not to treat him too often, nor continue treatment too long; and you will, unless he is too old, from year to year improve his condition, until his cure is effected, or, as Dr. Rumbold styles it, "grown well." In the management of a case of chronic nasal catarrh, the patient should be treated as long as he improves. When improvement ceases and further treatment aggravates the trouble, stop treatment until the ensuing Fall or Spring. Then, with the first onset of a cold, begin treatment again and continue it so long as the patient is benefited thereby. This course should be continued each Fall and Spring until the patient has recovered or grown well. During the interim, the patient must observe the laws of hygiene. He must avoid night air and vitiated air of every kind, properly clothe himself, thereby maintaining a pleasant, uniform temperature of the body, and, in every conceivable way, guard against taking cold.

Catarrhal patients should ordinarily guard against undue exertion, either mental or physical, and avail themselves of

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an abundance of sleep. Undue physical exertion is generally attended with free perspiration, which renders the patient very liable to take cold. Each cold adds fuel to the flame, and unless broken up quickly leaves the inflamed mucous membrane in a worse condition than previously existed. It is wrong to permit a cold to wear off slowly; it should be relieved as early as possible, from the fact that while the cold is slowly wearing off, the chronic inflammatory condition is increasing. "Taking cold," therefore, is the great enemy we have to combat in the treatment of catarrhal troubles.

Chronic nasal catarrh cannot be cured in a short time. I treated last Spring, during April and May, a patient who had been treated by an eminent throat specialist some years since for five weeks, and discharged as cured. This patient, after returning home, called to see me, not with a view, however, of taking treatment, but simply to talk with me upon the subject of her ailment. Having examined and prescribed for her previously, I was familiar with her disease, and knowing the obstinacy with which similar troubles usually yielded, I said to her: "Are you not aware that you are not well?" She replied: "Yes; I know I am not well." I told her that she had been treated by an excellent physician, but it was impossible for him or any other man to cure her in five weeks' time. The patient took no more treatment for eight years until last Spring, from the fact that she had given up all hope of deriving any permanent benefit, and complained of her former treatment as being injurious. But on coming to me last Spring, she said: "Doctor, I will give you a trial; but I do not expect to be benefited very materially." I am gratified in saying that this lady, who had suffered so long, and who had been treated by so many good men, improved gradually and steadily during the two months of her treatment, and continued to improve after I ceased treating her to such an extent as to feel comparatively free from the unpleasant symptoms which had annoyed her for so many years. The treatment, followed up each Fall and Spring for several years, would give this patient comparative immunity from the many unpleasant symptoms which she had previously experienced.

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The treatment used in her case was that usually resorted to by Dr. Thos. F. Rumbold, of St. Louis. The symptoms, concomitants and results of chronic nasal catarrh heretofore given in this paper are in substance the views of Dr. Rumbold. I therefore wish him to have due credit.

Reference to the above case illustrates our inability to cure a chronic catarrh in a short time. It can not, and must not be expected that, in a short while, we can correct pathological changes which have been going on for years, thereby restoring the mucous membrane to its former healthy condition. Catarrh usually begins during childhood and is increased with the onset of a cold each Fall and Spring, until the trouble becomes chronic or results in recovery. In case of chronic catarrh, the pathological changes must be made to retrace their steps by proper treatment each Fall and Spring, until the mucous membrane resumes its normal function and condition. The patient is not well, in the true sense of the word, until this has been accomplished. While in some patients this cannot be done, their condition can be greatly improved by treatment, and they can be made to enjoy comparative freedom from the effects of their trouble by taking a little treatment each Fall and Spring. The younger class of patients may, and do, get well in a comparatively short time, from the fact that the disease with them has not existed so long; and, again, the young naturally recover more rapidly than the older class of patients.

Sometimes chronic nasal catarrh is complicated by the presence of polypus or other morbid growth, or in the hypertrophic form of the disease, by an excessive thickened condition of the mucous membrane. In this event Jarvis' snare should be brought into requisition, and the growth, or thickened mucous membrane, snared out. I have had the pleasure of witnessing the Doctor's skillful and dextrous manipulations with his snare, which instrument I heartily endorse and recommend to the profession. The Doctor, after engaging the growth or hypertrophied tissue, permits his patient to hold the snare while he tightens the wire upon the growth or mucous membrane, stopping operative procedure every now and then until the operation is completed. Should

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the operation be too much hurried in case of removal of hypertrophied mucous membrane, especially excessive hemorrhage might ensue because of its cavernous and reticular structure. In cases of this kind, I think Jarvis' snare is superior to any other instrument from the fact that it does its work more thoroughly, and with less liability to hemorrhage, which might otherwise exist to an alarming extent. In removing a polypus, the snare tends to lower itself upon the pedicle of the polypus, thereby removing it more thoroughly than a forceps usually will; as a result, the polypus is less likely to return. Rumbold's forceps we consider the best forceps that can be brought into requisition in the removal of nasal polypi. Jarvis' snare and Rumbold's forceps I consider a *sine qua non* in the removal of nasal polypi and growths occurring in the nasal and naso-pharyngeal cavities. Smith's canular scissors, Bosworth's curette, McKenzie's curette, the galvano-cautery, and various caustics, such as chromic acid, nitric acid, acetic acid or glacial acetic acid—are resorted to in the removal of hypertrophied mucous membrane and adenoid tissue in the vault of the pharynx.

Deviated septum may also complicate and aggravate nasal catarrh, thereby rendering operative procedure necessary. In this event, I should again suggest the use of the snare and transfixion needles, with which the redundant and deviated tissue is removed, thereby correcting the deviation and taking off nerve pressure and pressure irritation. I can not recall to mind an instance in which any authority refers to pressure irritation in atrophic or dry catarrh. While the mucous follicles are atrophied, secretions are poured out upon the inflamed mucous membrane, there to dry and adhere tightly, giving rise to pressure irritation which is very unpleasant—indeed so much so that the patient, in many instances, cannot rest with any degree of comfort until the irritating pellicle or crust is removed with the finger or otherwise. The removal of this pellicle or crust from day to day by the finger is attended with destruction of the tissue underneath by a slow process of absorption until a perforation is formed in the cartilaginous portion of the septum.

Just at this juncture, I think the application of cosmoline

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or vaseline would prove beneficial. It counteracts inflammation by forming a protecting coating to the inflamed mucous membrane; it maintains the secretions in a more liquid state, counteracting the tendency to inspissation, thereby preventing that tenacious adherence of the secretions, whereby their removal is greatly facilitated. Robinson directs that vaseline or cosmoline be applied at night. This facilitates the easier removal of secretions in the morning and enables the parts to be maintained in a more cleanly condition, and subjects the inflamed mucous membrane to less mechanical injury in removing the secretions therefrom.

What line of treatment is indicated in the treatment of chronic nasal catarrh? We wish to maintain the inflamed surfaces in a comparatively cleanly condition, thereby counteracting irritation from the presence of morbid secretions; we wish to diminish secretion in one case, and stimulate it in another, and at the same time change it from an unhealthy to a healthy condition; we wish to counteract an undue determination of blood to the inflamed parts by counteracting irritation and diminishing the size of blood-vessels—in short, we seek to restore the mucous membrane to the performance of its normal function and condition.

A solution of chloride of sodium or Dobell's solution is usually used as a detergent, either with a douche or spray producer; but in the great majority of cases, cosmoline or vaseline sprayed behind the soft palate, combined with pinus canadensis, glycerine, carbolic acid, eucalyptol and hot water, will cleanse the parts sufficiently and medicate them at the same time. In case of atrophic catarrh or asthmatic complication, the astringent should be omitted. This course of treatment is usually pursued by Dr. Rumbold. Cosmoline not only protects the inflamed mucous membrane from the irritating effect of an atmosphere loaded with dust or other impurities and irritants, but it lessens the unpleasant, hot, full sensation so often present in nasal catarrh. This I know to be true from experience in my own case and from my observation in many other cases of this disease. I do not like Weber's douche nor the posterior nares syringe in the treatment of this disease. I prefer the spray producer or Rum-

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bold's catheter nasal douche—it being more effective and less irritating. The spray producer, however, is sufficient in the great majority of cases. Applicators mounted with absorbent cotton are sometimes used to free the inflamed membrane from morbid secretions, and also as a means of applying various medicaments, both to the anterior and posterior nares. Garre's and other spray producers are also used for the application of various astringents and caustics to the nose and throat with a pressure so great that the compressed air passing through the instrument strikes the inflamed and delicate mucous membrane with such force as to almost deprive it of its epithelium. Too much air is injurious, and should not be used—seven to ten pounds' pressure being sufficient, and in asthmatic patients even much less than seven pounds will suffice. Unless we use a very gentle spray upon this class of patients, the treatment is so intercepted by sneezing on the part of the patient that we have to desist. Cosmoline or vaseline and eucalyptol sprayed into the posterior nares with a number four or five spray, and in the anterior nares with a number two spray, according to Rumbold, is very beneficial.

In the treatment of catarrhal troubles, we must interfere as little as possible with the normal function of the mucous membrane. We should therefore be careful in the use of caustics and astringents. In fact, I should not use caustic applications except in cases of hypertrophy; even in those cases, Jarvis' snare is preferable. In atrophic or dry catarrh, we wish to maintain the affected mucous membrane in a comparatively cleanly condition, stimulate the mucous follicles to a healthy action, counteract inspissation and facilitate removal of unhealthy and irritating secretions, and, with a mild antiseptic, counteract the deleterious effects of decomposition of the morbid secretions. Each application should be preceded by a rhinoscopic examination, in order that we may be enabled thereby to note the changes occurring in the inflamed structures.

Diminished redness and secretion, with increased sensibility of the mucous membrane and diminution in the size of blood-vessels, is evidence of improvement. As the patient improves, he will require less treatment. At first he

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may require treatment every day for a few days; then every other day for a few weeks; then twice a week, or once a week, *pro re nata*. Unless we often examine our patients, rhinoscopically, noting their progress, etc., we will not manage them very successfully. We should learn everything we can from every patient.

We cannot treat every case alike. "Routineism" will not answer in the management of this trouble. Should there be any dyscrasia, constitutional ailment, or defect, which has a bearing upon the existing catarrhal trouble, if possible, remove it. Various powder blowers are also used in the treatment of this almost intractable disease—in many instances, I have no doubt, with beneficial results; but I, like Rumbold and Jarvis, think the spray producer, when used properly and with discrimination, the very best cleansing and medicating agent that can be employed in the treatment of catarrhal troubles of the upper air passages. Dr. Brandies prefers the applicator mounted with absorbent cotton, which is then saturated with a mixture of vaseline, ten parts, and yellow oxide of mercury, one part, passed up behind the soft palate, manipulating it in such a way as to bring it in contact with the affected surfaces of the pharyngeal vault. Then another applicator, prepared in the same manner, is passed into the anterior nares, manipulating it in such a way as to apply it as freely and thoroughly as possible to the Pituitary membrane. Seiler, in his late work on "Diseases of the Throat," directs that we should, in the first and second stages of hypertrophic nasal catarrh, use some detergent, as a solution of chloride of sodium or Dobell's solution sniffed up the nose twice a day with a view of keeping the nasal cavities cleansed; also an astringent which he applies with an atomizer two or three times a week—the most suitable astringent being selected, such as a solution of ferric alum, sulphate of zinc, copper, iron, etc., distilled extract of witch-hazel diluted one-half with water, or, finally, Boulton's solution, which is composed of compound tincture of iodine, carbolic acid, glycerine and water. This he directs to be used with an atomizer. He also advises the use of electricity, two or three times a week, for about five minutes

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at a time in order to reduce turgescence, and the galvano-cautery for the removal of hypertrophied tissue. Bosworth does not favor the use of the galvano-cautery. He says: "It is an immensely over-estimated instrument, and, in my experience, has utterly failed to accomplish what we formerly anticipated from it. Moreover, I believe we should always recognize the fact that the application of the galvano-cautery is attended oftentimes with a very severe reaction, setting up renewed inflammatory processes, by which a growth may be stimulated to new development, and a part at least of what has been accomplished may be counterbalanced by the renewed process of growth."

Bosworth prefers Jarvis' snare to forceps, caustics or galvano-cautery. In some cases, however, he is particularly partial to glacial acetic acid. Bosworth classifies chronic nasal catarrh as follows:

"*First*, Chronic coryza—a chronic inflammation of the nasal mucous membrane, characterized by an excessive discharge of mucus, but marked by no important structural changes.

"*Second*, Hypertrophic nasal catarrh—a chronic inflammation of the mucous membrane, characterized by an excessive secretion of mucus or muco-pus, and also marked by certain structural changes in the membrane by which it is thickened or hypertrophied. This hypertrophy also involves the glands at the vault of the pharynx.

"*Third*, Atrophic nasal catarrh—a chronic inflammation of the mucous membrane in which the glandular structures are involved in such a way as to seriously interfere with their functions. As the result of this, the membrane fails of its proper supply of mucus, and therefore becomes abnormally dry. This is the so-called 'dry catarrh.' It is also designated 'pharyngitis sicca.'

"*Fourth*, Fetid catarrh—a catarrh characterized by a fetid and offensive discharge, and which, in the large majority of cases, if not in all, is the direct result of the atrophic or dry catarrh.

"*Fifth*, Ozæna—properly a disease of the accessory sinus, but manifesting its symptoms in the nasal cavities."

Seiler considers Bosworth's fifth variety of this disease, ozæna, simply a symptom of chronic atrophic nasal catarrh. For the first variety of Bosworth's division, he advises

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cleansing the nasal passages by means of an atomizer, exciting as little irritation as possible—using biborate of soda, gr. x to water ℥j, which may be improved by the addition of common salt, gr. x to water ℥j. His best cleanser, however, is Dobell's solution, which must be reduced in strength if irritating. He applies various astringent solutions by means of the atomizer. Powders composed of astringents, chlorate of patash and bismuth combined with lycopodium or powdered starch in this variety of the disease, he thinks are especially beneficial—they being dissolved in the secretions which are always fluid, thereby remaining longer in contact with the membrane and maintaining their astringent effect longer. "Powders should be applied with the powder-blower, as it deposits the powder uniformly. In connection with this course, the use of Wever's nasal douche every day is advised—this affection being largely confined to the lower portion of the nasal cavity. For hypertrophic catarrh, Dr. Bosworth recommends, in addition to the various astringents applied with the atomizer, powders such as salicylic acid, subcarbonate of bismuth, tannin, nitrate of silver, zinc, etc., to be applied with the powder-blower. Should these methods fail, he resorts to more decided means, as destruction or removal of the hypertrophic tissue.

Robinson prefers the spray for cleansing, but if necessary, he uses the hair-brush or mat. He regrets that he cannot agree with Duplay, Franklin or Cohen in regard to the efficacy and necessity of the nasal douche. In its stead, he uses Dobell's solution with sprays either Sasse's or Lipert's; and in the dry form of the disease, warm medicated vapor, fumigations of simple steam or steam impregnated with benzoin, alum, creasote, etc. Iodine ointment however he thinks better, introduced by means of a camel's hair pencil along the septum or lower and middle turbinated bones. Powders used with Smith's powder-blower, however, are his main reliance in the treatment of nasal catarrh.

Dr. Bosworth prefers the use of powders in the atrophic variety of catarrh as the effect of the remedy continues longer when applied otherwise. His favorite remedies "being sanguinaria, salicylic acid, bromide of potassium, myrrh,

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belladonna, creasote, compound tincture of iodine, etc., applied with the powder-blower or atomizer. In the fetid variety, Bosworth uses a solution of permanganate of potash, solution of chlorinated soda, carbolic acid and salicylic acid, and lastly with the insufflator. ℞ Iodoform. Acid. tannici, ā ā 3j; Lycopodii, 3ij. Misce."

This combination is thrown into the anterior nares, and into the posterior nares from behind the palate—the amount of the powder being sufficient to deposit a very thick phlem upon the living membrane of the cavity.

In conclusion, I will say that in this brief review of chronic nasal catarrh, I, in a very concise manner have alluded to some of the favorite methods and remedies most usually resorted to in the treatment of this disease by Rumbold, Jarvis, Bosworth, Brandies, Robinson and Seiler. In doing this, I hope I have done none of the authorities, referred to, the slightest injustice, as they are entitled to the highest commendation, respect and professional courtesy for the great good they have rendered suffering humanity, in their able contributions to the literature of this subject.

Correspondence.

Treatment of Diphtheria.

Messrs. Editors,—I have just received a report of the proceedings of the Medical Society of Virginia, for 1883, in which I see the discussion of diphtheria prominently engaged the attention of that body. I have also just learned that a prominent citizen of Petersburg has just died with the same disease, notwithstanding he was treated by my distinguished friend and fellow-countyman, Dr. J. Herbert Claiborne, a man of whom every true physician is proud and who every true Virginian delights to honor. Notwithstanding this fact, death did its work.

Before proceeding to discuss the treatment of this disease, I would say that I have been practising medicine more than twenty-six years, and have no disposition to write for the

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sake of notoriety. The apology I offer for troubling you with this communication is alone in the interest of humanity.

The first time my attention was called to this disease was in 1853 or '54. Mr. Ben. King had an interesting family of children, two of whom were stricken down with the disease in a very malignant form; and, notwithstanding they were treated by the best medical men in this section of the country, they both died, and the father soon followed the children to the grave with the same disease. The disease was supposed to be caused by a damp cellar under the house. So thoroughly convinced were the medical men of this fact, that Mr. King ordered the house to be moved, which was done after his death. The treatment, as well as I remember, consisted in touching the diseased throat with caustic and giving a little constitutional treatment.

In 1858 I had located in the southern portion of this country, and this same disease broke out in my immediate vicinity; not slighting the mansions of the rich nor the houses of the poor. Remembering the treatment that had resulted in death in the King family, I determined to make a new departure. I dissolved a teaspoonful of pulverized copperas with a tablespoonful of common salt in about half pint of water. After mixing well I wrapped a thin piece of cotton or linen rag around my finger, and after wetting it in this solution I inserted it into the patient's throat, and completely wiped off every particle of epithelial matter. I threw that rag into the fire and repeated the operation with a clean rag, so as to get the solution in contact with the diseased surface. This destroys the fungus growth and prevents a reformation of the same. I require the patient to use a gargle of salt and alum as often as the severity of the case may indicate, and also to counter-irritate the throat with a flannel rag wrung out of hot salt and water, applied as warm as the patient can bear it. If the patient is much debilitated or nervous, I give small quantities of brandy and quinine at short intervals. If this treatment is persisted in it will cure a majority of cases in from three to six days.

I remember being called to see a very bad little boy, about eight years of age. He was sitting in his mother's lap,

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breathing badly, with a bloody discharge from his nose. I had to prize his teeth apart, so as to insert my finger and, as it were, to scour out the filth that was blockading the pathway to life. When I returned the next day, he was well enough to be at the door. As soon as he saw me he ran under the bed, and as I pulled him out by the foot he cried out, "Let me alone, I am asleep." He was well in a few days, and is now a prosperous farmer.

I think I must have seen more than one hundred cases during this epidemic, and not a single fatal case occurred in my practice that I saw within forty-eight hours after the inception of the disease.

I would no more hesitate to use force to wash out this death-dealing matter and save human life than I would to use the power of anæsthesia to control the muscular action of a strong man, who required amputation of a crushed leg in order to save his life. This to some may look rash; but what is it that our profession is not warranted in doing to save life?

I would state that while this epidemic was raging, Dr. Fred. W. Harrison, an old and eminent physician, stuck to the "let alone" theory and lost every case. About his last case was that of his little niece (a sprightly little girl about twelve years of age). When he saw that his treatment was futile, he sent for me. When I arrived he confessed that he knew nothing about the disease, and begged that I would do all I could to save her life. I soon returned and told him the child was then dying, the disease having gone down the trachea.

I invariably told my patrons if they did not send for me within forty-eight hours after the patient was taken, not to send at all. The main thing in the treatment is to meet the disease at the outset, and combat it from its very inception before it has poisoned the system and complicated the case.

In conclusion, I would say, if this treatment does not cure, then the disease has changed its character, or the remedies have lost their virtue.

R. S. POWELL, M. D.

White Plains, Va., January 11th, 1884.

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Questions Regarding Inebriety.

Messrs. Editors:

The undersigned, believing inebriety to be a disease, a true neurosis, the more prominent symptoms of which are great nervous irritability or restlessness, unnatural sensations, an incontrollable desire for alcoholic stimulants, and a disposition to frequent fits of intoxication; and believing that a departure from a healthy structure of the nervous apparatus exists, as in mental disease, that in fact it is this abnormal condition of the centric nervous system demanding stimulants that is essentially the disease; and being desirous of obtaining accurate and trustworthy information from the members of the Profession relating to the phenomena of inebriety as controlled by cosmical influences, such as electrical phenomena, lunar attractions, velocities and directions of winds, geological formations, elevations above the sea level, the approaches of storms, barometrical changes and temperature, would respectfully request any members of the Profession who may have in their possession facts of interest bearing on these points to kindly communicate them to him with permission to use the same for the benefit of the Profession in his studies in this field of mental pathology. Our studies and investigations thus far have led us to believe that inebriety and dipsomania are governed by the same laws which govern mental diseases generally; and we desire to make such investigations as exhaustive as possible, that the results may be conclusive and scientific when presented to the Profession. To this end, believing that we should study this subject as physiologists and pathologists, and not as moralists or reformers, we ask your kind coöperation in our endeavor towards the scientific elucidation of these obscure points relating to the disease of inebriety. We would also ask:

1. What diatheses and cachexias you may have noticed in the course of your practice to be most frequently associated with inebriety?

2. In what cases, if any, have you noticed reflex excitability as a cause of inebriety?

3. What previous diseases, if any, have you noticed, which may have operated in the causation of inebriety?

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4. Have you observed exhaustive intellectual and physical exertion or mental strain and activity to operate as a cause, and if so, will you kindly give an outline of such cases?

5. Have you noticed blows on the head, sunstroke or spinal concussion, as a cause of inebriety?

6. Have you knowledge of over-stimulation of the brain in school children, followed by inebriety at puberty or in after life, the inebriety being separated by a distinctly long interval of time from the too intense stimulation of the brain which caused it, a state of neurasthenia preceding the inebriety?

7. Have you known cases of inebriety in which you could refer to the occurrence of puberty as a cause, or, in women, to the menopause?

8. Have you known any particular surroundings, business, or geographical districts to influence the production of inebriety?

9. Have you observed that when inebriety is fully developed the the desire for drink is not appeased by any moderate quantity; that the desire is intense, and satisfied only by complete intoxication?

10. Have you ever known an inebriate whose nerve tissue you considered to be sound and free from defect, whether he was a steady or a paroxysmal drinker?

11. What influence have you observed normal menstruation to exert upon females addicted to inebriety?

12. Have you had or known of cases of inebriety who during the intervals did not drink, but who experienced an accession of the disease with each return of the catamenia?

13. What per cent. of the higher and middle classes exhibit the disease of inebriety as compared with the same number of the lower or laboring classes?

14. In your experience has excessive drinking, by producing disturbance of the brain, induced insanity?

15. In the disease of inebriety, when fully developed, have you known the effect of moral or reformatory treatment alone to produce any amelioration of the disease?

(It will be seen that our desire is to elicit precise and definite opinions on points about which there is at present much

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confusion. Drinking is the pathognomonic symptom of the *disease* of inebriety. It is *the insatiate desire to drink* that constitutes the real morbid condition.)

16. Do not the accumulated results of your experience indicate decisively that the propensity for drink in this disease, when under the influence of exciting cause, arouses the appetite, overcomes the will, blunts the moral sensibilities, and makes everything else subservient to its demands? That the will power of the individual is overwhelmed by the violence of the morbid impulse or propensity?

17. If this morbid craving for stimulants is clearly traceable to a brain condition, what do you consider the mental responsibility of an inebriate?

Please address, EDWARD C. MANN, M. D.,
28 *West Thirtieth St., New York City.*

[It is proper to add that the request to insert these queries was received before the communication of Dr. Crothers, published in our January number, 1884; but the manuscript was accidentally mislaid. It is to be hoped that our subscribers generally will favor Dr. Mann with prompt answers to these questions, as he is a close student of the subject and will give the Profession the benefit of his conclusions.—EDITORS.]

Cape Charles Quarantine Station—Corrections in Dr. Walter Wyman's Paper.

Messrs. Editors,—I have just finished the perusal of Dr. Walter Wyman's paper on "Quarantine," read before the Sanitary Convention of Maryland in November last.

The Doctor's review of the operations of the Quarantine Service in 1883 is extremely interesting and, I believe, in the main just. His reasons why the Marine Hospital Service should be charged with the guardianship of the maritime avenues by which epidemic diseases approach our homes, are forcible, and, I think, convincing. But in regard to the Cape Charles Quarantine Station the author is mistaken in many important particulars, and justice demands that the paper be corrected to this extent. I was for a short time professionally employed on this station and testify of what I have seen.

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On July 24th, 1883, the steamer "Andean" appeared at Newport's News with one case of yellow fever on board, which proved fatal the same day. The ship proceeded to sea and buried this man and returned to Quarantine. She never had another case on board; hence no cases were transferred to the "Selden."

At the conference at Old Point, which took place on the 27th of July, the "Selden" was ordered to the "Middle Ground" in the Chesapeake Bay—a point about three miles from the nearest shore. Now the "Selden" was an old worn-out canal boat, built by Capt. J. L. Roper to convey lumber, and was sold by him for use at the Craney Island Quarantine Station. She had been housed over, and was in every possible respect unfit for service at the exposed point named.

On Sunday, July 29th, the "Californian" returned with her four sick from Baltimore and anchored near Willoughby Spit. The same day Dr. Henry Smith, of the Marine Hospital Service at this port, having heard of the state of affairs, threw up his leave of absence and returned voluntarily to duty here. His first act, in response to telegraphic orders from Surgeon-General Hamilton, was to employ a physician to take charge of the sick. I was the physician so employed. The "Fish-hawk" towed the "Selden" to her "most commodious anchorage," and the "Geo. W. Roper" put me on board of the "Californian," where I found four sick—one in *articulo mortis*.

Both infected vessels were ordered to Lynnhaven Roads, and there we anchored. This is a point some ten miles across the mouth of the Bay from the anchorage of the "Selden," which could not be approached by either of the two ships in Quarantine.

The next day Dr. Smith was ordered to take charge of the "Selden." He did so, and it was found impossible to transfer the sick. In the next four days we succeeded in sending to the "Selden" two men—one a convalescent, the other a man who had suspicious symptoms but who did not develop the disease. And then Dr. Smith had a frightful experience. The little old canal boat performed every possible manœuvre

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in her "roomy berth." There were seven men on her. She was furnished with two boats—one a flat-bottomed skiff, the other a heavy yawl, which no one except the two patients knew how to manage, and they were sick men. With these conveniences, Dr. Smith was expected to watch ten miles of channel, superintend the disinfection of the vessels in Lynnhaven Roads, and, apparently, to keep himself and crew provided with provisions and water. At any rate he was not approached by any vessel for several days. On Friday, August 3rd, he was at last relieved from his disagreeable and dangerous position. The Baker Salvage Company sent a steamer to his assistance, and the "Selden" was moved to Fisherman's Inlet. This same day I was relieved from my charge on board of the "Californian," which proceeded to sea, and, together with the pilot, placed in quarantine aboard the "Selden." We found her in an exposed situation at the entrance of Fisherman's Inlet, and had the pleasure of contemplating the serene beauty of the stars through the roof, which had been opened by the rolling of the preceding days at the "roomy anchorage" of the Middle Ground. If the stars were serene that night, they were the only things that were; the water was not, the "Selden" was not, and I can most emphatically assert that none of her crew or passengers were. The next day, the pilot, Mr. Evans, of Baltimore, and I volunteered to "kedge" the barge into a safer anchorage. After three days of severe physical exertion, which was participated in by all hands—sick and well—we succeeded in getting her into comparatively smooth water. She has since gone to pieces in that place. So an inference may be drawn as to the safety of the "roomy anchorage" on the Middle Ground. During the plunging and tossing we experienced before getting inside the Inlet, the water tanks were broken and we found ourselves on short allowance. Our wood gave out, and cooking became at least difficult. We were strictly quarantined—not allowed to land to make our wants known, and we were in very bad plight when, on the night of Tuesday, August the 7th, the "Ewing" came to us, and by pulling and sailing our heavy yawl a mile, we secured a supply of wood and water. On Wednesday the 8th, I was released

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from restraint, and sunrise found me walking through the heavy sand on my way to Cherrystone, fifteen miles off, to return to Norfolk. I secured a conveyance and made the trip comfortably.

To secure the pay due for my services was a matter of much time and annoyance to both Dr. Smith and myself, and I only received it at last by appealing from Dr. Hamilton to the Secretary of the Treasury.

Dr. Smith remained on the "Selden" for sometime, and finally the "Woodworth" (steamer) was placed at his disposal, and the station became effective to the utmost degree when one takes into consideration that it is located beyond sight of the course of ships entering the Bay.

During one of the nights of "perfect calm" which occur in those parts, the "Woodworth" dragged her anchor and went ashore, and could not be moved until assistance was sent from this side.

Dr. Smith worked as hard and earnestly as a man could, and with as much good result as was obtainable under the circumstances, and the upshot of the matter was to him several months' painful illness from exposure, and the neglect of all mention of him in connection with Cape Charles Quarantine Station.

Wm. A. Thom, Jr., M. D.,
128 *Main Street.*

Norfolk, Va., January 31st, 1884.

Original Translations.

From the French and German. By WM. C. DABNEY, M. D., Charlottesville, Va.

Use of the Elastic Ligature in Operations for Uterine and Ovarian Tumors —At the meeting of the Société de Chirurgie on the 28th of November last, M. Pozzi read a paper on this subject, which elicited considerable discussion as to the value of elastic ligatures in such cases. M. Pozzi, himself, gave an account of the different modes of using the ligatures. He exhibited one made according to the suggestions of M. Collin, and stated that they were used much more in other countries than in France.

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M. Lucas Championnière said that the method of treatment was sufficiently familiar to all surgeons, but the results obtained by it had been such as to render it very unpopular, especially in those cases where the pedicle was returned. The tendency at present he thought was to abandon the use of elastic ligatures in such cases altogether.

In response to a question asked by M. Tevrier, M. Pozzi said that he had used these ligatures in two cases, in both of which the pedicle was left outside; one of his patients recovered. If it were advisable on other grounds to return the pedicle into the abdomen, he would think it best to draw the two ends of the elastic ligature out through the vagina. In this way they could be made to act as drainage tubes, and would enable the surgeon to remove the ligature readily when it becomes detached.

M. Tevrier said that the chief objection to these ligatures was that they increased the danger of suppuration in those cases where the pedicle was returned; nor did he think that the elastic cords or threads could be made to act as drainage tubes; a drainage tube had of necessity to be *a tube*, and, furthermore, it should be pierced with holes. The great advantage of the method was that it prevented hæmorrhage better than other methods; and on this account it was worthy of serious attention. The disadvantage, he repeated, was that it might cause suppuration; indeed, this result was almost inevitable.

M. Pozzi stated, in reply to one of these objections, that the elastic ligatures which he recommended were solid in the middle part of their course and tubular near their extremities, and that it would be an easy matter to pierce these tubular parts with holes, which would render them effectual drainage tubes.—(*Le Progrès Médical*, Dec. 8th, 1883).

Antagonism between Pilocarpine and Ergot.—M. Robertson read a note on this subject at the meeting of the Société de Biologie on December 8th, 1883. He found that if ten centigrammes of Boujeau's ergotine were injected into a rabbit and some moments afterwards one centigramme of pilocarpine were also injected, salivation was produced, just as if the pilocarpine alone had been administered. But, if the two injections were made simultaneously, the salivation was considerably diminished, and sometimes even suppressed altogether if the dose of pilocarpine had been large. This suppression of the flow of saliva was only temporary however. At the end of half an hour it appeared, but could be checked by administering another dose of ergot. The rea-

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son why the antagonism lasts so short a time is to be found in the fact that ergot is much more rapidly eliminated than pilocarpine. The antagonism itself is to be explained in this way:—Ergot causes contraction of the muscular fibres, and pilocarpine causes a relaxation. [The action of pilocarpine cannot be explained entirely in this way; other drugs causing just as great relaxation of the muscular tissue do not cause sweating or salivation to nearly the same extent.—W. C. D.]

Relative Merits of Osteotomy and Osteoclasis at Different Periods of Life.—This subject was quite freely discussed at a recent meeting of the Société de Chirurgie. (*Le Progrès Médical*, December 15th). It was brought up by a report of M. Polaillon on four cases of osteotomy operated on by M. Dubourg. In the two first cases, osteotomy was done by M. Dubourg for genu valgum in children four years old. The method and instruments of Mac Ewen were employed and antiseptic precautions were adopted. Both of these cases resulted very satisfactorily. The third case was an infant twenty-nine months old, and osteotomy was practised for an incurvation of the tibia due to rachitis. This patient also recovered. The fourth operation was done to cure the deformity resulting from a white swelling of the knee in a boy fourteen years old, and the result was all that could be desired.

M. Polaillon criticised the performance of osteotomy in the first three cases, although all resulted favorably.

Osteoclasis, he said, was a far safer operation in children, and was perfectly practicable in them. In adults, the bones, unless they had been altered by disease, were too hard to render osteoclasis practicable as a general thing.

M. Redus stated that he had practised osteoclasis nine times at the Trousseau Hospital—sometimes for genu valgum and sometimes for rachitic curvations. There was no accident in any of the cases, and all were completely successful. He used the apparatus constructed by M. Collin, which was generally sufficient, even in very muscular persons, and which had this further advantage—that it permitted the bone to be broken wherever it was thought best. He thought osteoclasis by this apparatus far preferable to the simple "manual" method, though M. Borckel had formed a very different opinion. With such an instrument and such results as had been obtained with it, he did not think that children should be subjected to the dangers of osteotomy.

M. Gillette also thought osteotomy very dangerous in

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young subjects, and stated that even osteoclasis should not be done during the first years of life, but only when the child had reached the age of ten or twelve years. In the adult, he recommended combining the two methods—partially dividing the bone and then breaking it across.

M. Verneuil said he was not opposed to osteotomy, but he recognized the fact that osteoclasis was more frequently indicated than osteotomy, especially since surgeons had, now-a-days, so efficient and harmless an apparatus as that of Collin. He called attention to the fact that in anchyloses, caused by white swelling, the bone was for a long time thin, and could be easily broken, and he had often obtained good results by this practice.

M. Pryer said that osteotomy had its dangers, and osteoclasis its failures. He had seen consolidation fail to occur after osteoclasis in spite of the employment of all the means usually resorted to to bring about such a result. He mentioned especially two cases in which this happened; in these, the bone was broken to redress an anchylosis of the knee-joint.

M. Terrellon said he had frequently performed osteoclasis with the hands at the Trousseau Hospital before the invention of Collin's apparatus with comparatively little pain, and always with success.

M. Despres considered both operations absurd and anti-surgical. According to his experience, good nourishment and other hygienic surroundings were sufficient to redress rachitic curvatures in young subjects.

M. Redus said if M. Despres were correct, it was strange that there were still so many persons deformed by rachitis.

M. Lucas Championniere thought it unjust to condemn osteotomy in such general terms. The statistics included operations performed under very different circumstances and by surgeons having different degrees of skill. He himself had done a number of operations on the bones, and had never had an accident. Mac Ewen had performed a great many such operations, and had "never seen any accidents." Osteotomy, properly performed, was, he thought, devoid of danger, and it was proper to consider whether the results were not more rapidly obtained and more perfect also than after osteoclasis.

M. Despres claimed that the operation of osteoclasis was very unscientific; that the surgeon was working in the dark, and he again expressed disapproval of both operations.

M. Trelat said it would be wise to consider the two opera-

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tions separately and try to find out what cases were suited to each.

M. Polaillon spoke in the same strain. He had no doubt that osteotomy was preferable to osteoclasis in some cases, and it was important to find out just what cases were preferably treated by each method. In a general way, he thought osteoclasis preferable in young subjects, and osteotomy in older ones.

Anginas of the Chest.—During the past year a series of papers on this subject of more than ordinary interest have been published in the *Revue de Médicine* by Dr. H. Huchard. The following abstract of them is taken from *Le Praticien* of January 7th, 1884.

M. Huchard commences by stating that what we have been accustomed to call angina of the chest or neuralgia of the heart is in reality not a single disease, but a symptom which may be due to several different pathological conditions.

The theories which have been advanced for angina pectoris are very numerous, but may be arranged in four different groups:

1st. The arterial theory. According to this, angina pectoris may be due to ossification of the coronary arteries, to a disease of the heart or great vessels, or to a lesion of the aorta alone by which the cardiac plexus is disturbed.

Finally, so far as this group is concerned, angina is thought by quite a number of physicians to be due to cardiac ischæmia, which, in its turn, may be caused by embolism, narrowing or spasm of the coronary arteries. It is to this latter cause that the author of the present paper thinks that *true* angina pectoris is due.

2nd. The Nervous Theories. These are very numerous, and only the most important will be cited. All the thoracic nerves have, in turn, been charged with inducing this powerful and dangerous affection.

3rd. Another group of theories M. Huchard calls the myocardiac theories. In these are included those veins which attribute the disease to spasm of the heart, incomplete paralysis of the heart, and dilatation from fatty degeneration of this organ.

4th. Diathetic theories, according to which this disease is supposed to be due to gout attacking the heart, the diaphragm, or the stomach—the cardiac symptoms being due to sympathy only.

Most of these theories have appeared to have some ground to rest upon; but that which is most in accord with recent

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studies and investigations, and to which MM. See, Potain, and Huchard have given their adherence, is the one attributing the attacks to cardiac ischæmia. This ischæmia may be due to one of several causes, as has been stated above, namely, to embolism, thrombosis, or simple spasm of the coronary arteries. However produced, the disease manifests itself in the same way, by excruciating pain in the chest, coming on suddenly, and causing a feeling of the most intense apprehension.

A fact, however, which M. Huchard considers well established, and which is of very great practical importance, is that the causes of attacks which, in themselves, present but little difference, may be very unlike, and the cases themselves may pursue a very different course and justify a very different prognosis.

M. Huchard states that he would place in one category all those cases in which there is an alteration in the aorta, or, what is more important, in the coronary arteries, and further any alteration whatever which would cause cardiac ischæmia. These are the anginas of arterial origin and are dangerous.

In the other category he places cases of angina pectoris occurring in neurasthenics, dyspeptics, hysterics, or in those addicted to the excessive use of tobacco. These are the anginas of nervous origin, and are not dangerous. In the same category, for the reason that the attacks are harmless, he placed those cases in which the attacks are caused by dilatation of the heart. [The harmlessness of these attacks is questionable.—W. C. D.]

In a paper presented to the Société Medicale des Hopitaux on the 14th of December last, M. Huchard stated his views as to the treatment of angina pectoris, recommending the agents now in common use for the affection in this country —nitrite of amyl and nitrite of sodium. With respect to the latter drug, he states that it is very poisonous, and hence should only be given in very small doses. [Strange to say, he does not mention nitro-glycerine, which has attracted so much attention recently.—W. C. D.]

Kairin as an Antipyretic.—By Dr. Merkel. (*Deutsche Archiv für klin. Med.*, XXXIV Band. L. Heft.) In this paper Merkel publishes the results of some investigations on the antipyretic action of kairin made in the public hospital at Nuremberg. The results were, generally speaking, very favorable.

The number of cases in which the medicine was used was nineteen, namely: three cases of pulmonary phthisis, three

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of croupous pneumonia, one of pleurisy, one of endocarditis, one of anæmia, one of scarlet fever, and nine of typhoid fever. The latter were treated with kairin during the whole course of the disease. The smallest daily dose was 2.75 grammes, the largest 12.5 grammes. He thus summarizes the conclusions at which he arrived:

(1). Kairin is a very powerful, though not the most powerful of the antipyretics suited for internal administration.

(2). It causes a fall of temperature in every case, the amount of depression being dependent not only on the size of the dose, but to a very great extent on the constitution of the patient and the causes which gave rise to the fever.

(3). The depression of temperature is, as a rule, not attended by collapse or any other unpleasant symptoms, the effect being indeed quite pleasant to the patient.

(4). The effect of the first dose should be carefully observed, and subsequent doses be regulated accordingly. As a general rule it can be determined at once what dose is the proper one for the individual case, but sometimes it is necessary to keep the patient under observation several days before a positive opinion can be reached.

(5). The indications for the use of kairin are the same as those for other forms of antipyretic treatment, namely, the presence of a continued fever in a patient whose heart and lungs are not weakened or overtaxed.

(6). It seems to have no influence on the course of the disease, but on this point further investigations are necessary.

Use of Intra-Venous Injections of "Alkaline Salt Solutions." In the *Rundschau* for November, 1883, Rockett publishes the report of four cases of different character and treated by different physicians, in which the intra-venous injection of a solution of common salt and carbonate of soda was employed.

The first case, reported by Dr. L. Szumann in the *Berliner klin. Wochenschrift*, No. 21, 1883. was that of a person whose condition was one of alarming prostration, due to loss of blood from a severe wound Seven hundred and sixty grammes of a solution consisting of six grammes of common salt, one gramme of carbonate of soda, and 1,000 grammes of water, at a temperature of 104° F., was injected into the median vein by means of an irrigator and trocar (which had been previously disinfected), the irrigator being held about one meter above the patient. "Considerable improvement resulted."

The second case was reported by H. Heyden in the *Centralblatt für Gynäkologie*, No. 25. 1883. In this case a woman

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was reduced to a state of extreme prostration by post-partum hæmorrhage. Four hundred and fifty grammes of a solution similar to the one used in the first case and warmed to a temperature of 40 C. (104° F.) were injected into the median vein by means of a glass irrigator. The result was most satisfactory and the patient made a good recovery.

Another case is reported by Wildt (of Cairo) in the *Centralblatt für Chirurgie*, No. 37, 1883. The patient in this instance was in the algid stage of cholera, and 1,000 grammes of the salt solution were injected into the median vein through a trocar and gum elastic irrigator. The patient revived immediately after the operation, but died in an hour's time.

The fourth case, which occurred in the clinic of Professor Nothnagel in Vienna; was reported by Dr. Von Hacker in the *Weiner Med. Wochenschrift*, No. 37, 1883. The patient was a man 33 years old who was profoundly anæmic in consequence of repeated hæmorrhages from an ulcer of the stomach. An injection of 1,500 ccm. of the solution was made in the median vein. The patient rallied for a little while, but died in three hours' time.

Proceedings of Societies.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, January 6th, 1884.

Dr. William J. Morton, President, in the chair.

Menthol-Cone as an Anodyne.—Dr. E. C. Mendt showed a little contrivance, called, by the Germans, "*vigrano stift*," and explained the method of its application and uses. It consisted of a piece of menthol moulded into a conical shape and secured in a little wooden box, closed by a cover to prevent evaporation, soiling and breaking. It seemed to be very little know here, although it was much used abroad, especially for sick-headache.

His attention had been first directed to the anodyne properties of menthol by a short notice published in the *Medical Record* of April 25th, 1883, by Dr. Cannon. That gentleman had recommended an alcoholic solution (℥j to ℥ss alcohol) to be painted over the affected parts. Dr. Mendt had since that time often used this solution, and found it a rather reliable anodyne. Its pain-relieving action was restricted, however, to the slighter ailments, especially those

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of a neuralgic character. Since his acquaintance with the solid menthol-cone, he had frequently substituted the direct application of menthol by means of the latter for the solution formerly employed. He would admit that the only advantage which the solid cone or pencil had over the solution consisted in the greater simplicity of its application, its ready portability, and the fact that its vapor was not apt to irritate the eyes of susceptible patients. He had repeatedly heard complaints in that direction from ladies, regarding the solution, which was obviated by using the cone.

In this country, menthol had not yet received that amount of recognition from the profession to which its pain obtunding properties would seem to entitle it. In fact, little seemed to be known about it, and for this reason, Dr. Mendt thought it might not be amiss to quote a descriptive notice which had appeared in the *Midland Medical Miscellany*, of October, 1883.

"Menthol or menthylic alcohol, C10 H20 O, is a crystalline substance, deposited from the oil of peppermint, prepared in China and Japan from *Mentha Arvensis; variety piperascons* and *glabrata*."

It formed the chief ingredient of a much valued remedy for neuralgia before its nature or source was generally known. Under the name of Po-ho-yo, or *Gouttes Japonaises*, it has been sold in small bottles, labeled with Chinese characters.

It is a white crystalline stearéptone, melting when pure at 97° F., and is obtained by the Japanese from the oil of peppermint, by submitting it to freezing several times in succession until no more menthol crystallizes out.

It is also said to be contained in the American and English oils of peppermint, but probably in small quantities only. It is somewhat surprising that the Japanese peppermint plant which is grown in England as a curiosity has not been cultivated in that country as a source of the drug, the supply of menthol being uncertain, the demand great, and the price in consequence occasionally very high.

Menthol is said to be sometimes adulterated with crystals of Epsom-salts, to which it bears a great resemblance. These being insoluble in alcohol or chloroform, in which fluid menthol is freely soluble, it can easily be detected. Samples of fine crystals sometimes contain pure essential oil adhering to them, a fact which might be taken into consideration when the menthol is made into cones or pencils.

Menthol is but slightly soluble in water, although imparting a strong odor and taste to that liquid, and is soluble in

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aqueous alkalies. It is soluble in fixed and volatile oils and in ether.

Although Dr. Mendt's experience with menthol had not yet been a very extended one, it had nevertheless been sufficient to convince him of the utility of the drug in a rather large class of cases. Thus, as already stated, he had found it a pleasant and reliable anodyne in all the lesser neuralgias, and especially in those so frequently occurring about the face. But it was also serviceable in many painful affections, due to inflammatory processes. For example, in mumps, in the cervical adenitis, so often accompanying sore throat and in numerous other affections where pain was a prominent symptom, menthol might be used to advantage. With regard to its topical action, it was similar to that of aconite, over which it had the advantage of not being poisonous.

Dr. Mendt remembered one rather striking case of quite severe supraorbital neuralgia which refused to yield to the oleate of aconitia, but was much benefited by the menthol; but, on the whole, in violent attacks he had found it almost useless. In typical migraine, for instance, where the pain was at all severe, and in all deep-seated aches, of more than very moderate intensity, it had no appreciable effect, except perhaps the indirect psychical action of distracting the sufferer's attention.

In the discussion which followed these remarks, Dr. Roberts asked Dr. Mendt if he had tried the prolonged application of menthol.

Dr. Mendt said that he had in some cases of hemicrania, though without decided benefit. Nevertheless, the patients experienced a pleasant sensation of coolness of the surface followed by a feeling of agreeable warmth.

Dr. Morton desired to ask Dr. Mendt in what sense he used the term anodyne? Dr. Mendt said in the usual one, of affording relief from pain by blunting sensibility.

Dr. Morton thought that menthol probably acted more after the manner of counter-irritants, by insuring relief in a reflex rather than in directly local way. Mustard was a typical peripheral nerve-irritant, and it seemed to him that the action of menthol could be best explained on the same principle of procuring peripheral nerve-impression in a reflex way.

Dr. Morton continued that his attention had been first called to the menthol-cone by Dr. Mendt. He chanced to be at the latter's office one day when suffering from a headache. A few strokes of the menthol gave him at once a sense of relief. He felt the effects of the peppermint to be

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as gratefully cooling as the application, say of cold metal. In brachial neuralgia, as well as in sciatica, he had been pleased with the good effects of menthol. He thought the drug was deserving of further trials.

Dr. Ralph L. Parsons then read a paper on

Detention In Asylums.—The reader spoke first, of the question; whether sane persons were not often improperly or unjustly detained in asylums for the insane; and secondly, whether many uncured and incurable patients who were now methodically detained in asylums might not advantageously be returned to their relatives, or placed in the care of private families under State supervision.

It was assumed, in the first instance, that the detention of patients after recovery had taken place for a longer time than might be required, was quite possible and even probable in some instances. But, he claimed, that such detentions were not usually of serious import to the patient; that, on the other hand, too early discharge might be more injurious. It was also admitted that maliciously unjustifiable detentions were quite possible, as any other sort of injustice is possible on the part of persons holding positions of power and responsibility. But reasons were urged by Dr. Parsons in support of the belief that such malicious detentions were, at least, very rare; that sentiments of honor and professional pride were strong deterrents, to say nothing of the great danger of detection in the commission of the wrong, and the ease with which patients who were decidedly insane obtained their enlogement through the intervention of the courts.

Cogent reasons were given why various classes of convalescents ought to remain under asylum care for a period of time after they appeared to be well; as, for instance, where they would be immediately subjected to the exciting cause of their insanity on their return, when the progress toward convalescence has been characterized by relapses, or when dangerous delusions had been entertained and had faded away so gradually that there were difficulties in judging whether or not they had passed away entirely.

But, on the other hand, the discharge of certain uncured curables before they were well was advised, as when after making a certain degree of improvement, this improvement stopped and the patient seemed to retrograde. It might be safe and highly advisable to discharge some of these patients before they were well.

The major part of the paper was devoted, however, to an advocacy of the discharge from the asylum of harmless in-

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curables, and their return to the care of their friends, or placing them with ordinary families as boarders and, in some sort, as members of the families. It was claimed by the reader that, however comfortable and happy such patients may appear to be in large asylums, there are many causes of annoyance and discomfort that would not be experienced in ordinary family life; that, notwithstanding the fine buildings they occupy and their freedom from care, they are still prisoners and exposed to many disagreeable associations and associates. Quotations were made from Dr. Bucknill and from Dr. Maudsley, strongly supporting these views.

The question was then considered, what classes of incurables might safely and with benefit be released from asylum restraints. Since, in the case of a great majority of such patients, moderate cost of maintenance would be essential, those only would be adopted who were quiet and orderly and would require no especial attendance or supervision. Habits of industry would be favorable.

Whether such patients would do better with their relatives or with strangers, would depend on the circumstances of the family, the state of health, the surroundings, the feelings or notions of the patients, etc. It would be found, however, that many patients who would not do well with their own kindred, would be happy, contented and useful with congenial strangers. It would be impossible for the patient to resume his former position and influence in his own family, and hence he would be subjected to irritating restrictions and annoyance there.

As a preliminary measure, a system of legalized furloughs was advocated, to the end that at first the patient might still be under legal restrictions and easily returned to the asylum if the trial at large should prove a failure. Properly constituted authorities should make the selection of patients for the trial, with the assistance and under the advice of the Asylum Superintendent.

The families in which the patients should be placed should be selected with great care. While, at first, there might be found very few suitable families who would assume the charge, it was thought that, when a beginning had been made, plenty of suitable homes would be offered. Reference was made to the multitude of respectable and responsible families who take summer boarders for a moderate compensation, and the probability that some of these families would prefer one or two permanent patient boarders to a number of sane boarders for a short season during the

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busiest portion of the year. A suitable system of visitation and of reports was advocated. The paper closed with the following summary of conclusions, to wit:

1. That, inasmuch as many recoveries take place in asylums for the insane, it is to be expected that some convalescent patients may at any time be found in the wards.

2. That while possibly, now and then, a convalescent patient may be detained on probation an unnecessary period of time, such cases are not of frequent occurrence, nor important in their consequences when they happen; and that when they do occur the detention is very rarely indeed through criminal intent.

3. That many harmless incurables are unnecessarily detained in asylums for the insane; that these incurables would be happier in the enjoyment of ordinary family life and associations, and that systematic efforts should be made to secure their enlogement and their establishment under family care.

4. That under certain circumstances curable patients should be removed from asylum restraint and associations while yet uncured.

Owing to the lateness of the hour, the discussion upon Dr. Parson's paper was postponed until the next meeting of the Society.

Analyses, Selections, etc.

External Manipulations in Obstetric Practice.—Dr. George J. Engelmann, of St. Louis, in the course of a paper on this subject, read before the St. Louis Obstetrical and Gynecological Society, October 18, 1883, and published in the *Obstetric Gazette* January, 1884, says:

Old and well known, familiar to many, as these methods are in obstetric practice, they have been, I may say, rather instinctively resorted to by the ignorant, than used, defined and developed by the scientific practitioner. Though at all times frequently resorted to, Crede was the first to call attention to one of these manipulations for one particular purpose, and elevate it to the rank of a scientific method. They are all valuable, and deserve greater attention and study than has heretofore been devoted to them on the part of the obstetrician.

External manipulations, especially massage and expres-

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sion, are an aid to the abdominal muscles and uterine forces, and of great importance in the management of labor, as an aid in the same direction with that force so necessary to the normal expulsion of the fœtus, the *vis a tergo*. Though appreciated and advocated by many leading obstetricians, they are not as yet the common property of every practitioner; they are valuable agents in the hands of every one, harmless if properly directed, and if more thoroughly understood and more frequently resorted to would, with the assistance of proper posture, accomplish all the objects for which ergot is given, and do away with any one indication for the use of that dangerous drug.

Massage and expression being the only resources in the hands of primitive peoples for the completion of difficult labor, they intuitively, by instinct and by long practice—not by scientific reasoning, of course—have brought them to a certain state of perfection, although brute force is more relied upon than dextrous manipulation. The methods are so simple, so natural, and so thoroughly in accordance with sound mechanical principles, that they have produced good results. Deprived of the brutality of physical force, and aided by science, these very means which have so long and so well served the ignorant will attain a high degree of perfection, and will serve far better the scientific obstetrician.

The physiological effects of massage are readily seen. The circulation is improved, absorption is furthered, pain is eased, the nerves are strengthened, the nervous system is quieted, and the physiological activity of the body increased without cost of fuel, muscular or nervous exertion, to the patient; there is a probability of greatly stimulated idio-muscular contractility, and it seems as if massage had an effect similar to electricity upon the muscles; the contractions thus aroused are a great factor in the process of absorption.

The importance of massage in obstetric practice is at once evident; it is a soothing, nerve-quieting influence, allays the excitement of the patient, and the muscles are stimulated to increased activity. It serves a most excellent purpose in uterine inertia; whilst absolutely harmless, uterine activity is increased, the expression of the child hastened, and, after it is delivered, contraction and involution furthered; atony may be thus overcome and hæmorrhage checked; but pressure upon the fundus, the direct *vis a tergo* expression, is, above all others, one of the most important factors in obstetric practice, and, by reason of its simplicity, within reach of every one.

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1. The use of the hands for the rectification of position.
2. Massage.
3. Expression.

The rectification of position by external and combined manipulation is already well established in obstetric practice, and appreciated as a valuable scientific method, so that I shall confine my remarks to the uses of massage and expression.

Let us consider *massage*, under which term may be comprised the various external manipulations practised for the purpose of inducing uterine activity, friction, kneading and compression.

The use of friction with the palm of the hand, gently curved, upon the fundus of the uterine globe, for the purpose of exciting muscular activity, should be more frequently resorted to, both to stimulate labor pains and to correct those irregular, varying and painful, but ineffectual pains which so often accompany the first stage. With firm and steady but gentle pressure, the hand is passed over the abdominal walls, above the uterine body, following the circular fibres of the fundus. This, of course, is most useful before expulsion of the ovum, when the uterus is large and prominent, easily reached, though also of service in the third stage of labor, and even after expulsion of the placenta. The benefit is an evident one; as has been stated, it is quieting, soothing, especially under the conditions of nervous excitement caused by these irregular pains, and muscular contractility is stimulated; the effect may be compared to that of electricity. It is harmless, and we can thus at times correct those painful, ineffectual efforts of the womb, or arouse and strengthen its healthy contraction.

Equally important is *massage proper*, the kneading or compressing of the uterine globe—not to be confounded with expression, the mechanical forcing out of the contents of the cavity. This is more like the kneading of other muscles in general massage, or shampooing—serviceable only when the size of the organ has been reduced, in the third stage of labor, after expulsion of the placenta, and in abortion. The fundus or sides of the womb are grasped antero-posteriorly between the ball of the thumb and fingers of one hand, and gently squeezed—compressed. This is not only a powerful excitor of uterine contractions, but also directly aids in expelling the contents of the cavity, and can, when necessary, readily be combined with *expression*. The latter is an equally important manipulation, which has played an important part

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in the history of midwifery of many of the primitive people through all time. It was their only hope; the only way in which they could force labor, in which they could express the unwilling fœtus from the womb—a *vis a tergo* which was their only resort.

Primitive peoples have various uncouth methods of practising expression, the best of which are, perhaps, the tightening of a belt, the leaning with the uterine fundus against a staff firmly planted in the ground, or lying flat upon the ground with a pillow under the abdomen. A very effective and simple method is by encircling the body with the arms and pressing upon the womb, with palms of the hands clasped above the uterine globe, when the patient is seated in the lap of an assistant, when she is kneeling, squatting or standing, compressing the abdomen and pressing the womb down from above during each pain; a bandage passed around the body and tightened by assistants answers the same purpose as the encircling arms. An equally severe method adopted in retarded labor, and still advised in some of the modern works on obstetrics, is to have the ends of a towel or sheet, which is passed around the abdomen, crossed behind, each end being grasped by an assistant, whose duty it is to make firm traction upon the sheet, and especially to draw it tight as the abdomen diminishes in size, being careful to make traction in the intervals between the pains, lest the fœtus during this time should resume the position it occupied previous to the occurrence of the pain.

Expression is most conveniently made, under the circumstances in which we usually find the parturient woman, by the physician seated or standing at the bedside—best standing—the palm of his hand laid over and gently clasping the uterine fundus, slowly compressing this and forcing it in the direction of the pelvic axis, an excellent method, which has of late become quite popular in one of the cases in which expression is of service, in the expression of the placenta, when the uterine globe has been greatly diminished in volume. In expression of the after-coming head in breech presentations, where it is an assistance of the utmost importance, where the manipulations of the accoucheur are greatly aided, and often ineffective without proper expression by the hands of an assistant, the practice is somewhat different. In this case, as well as in the expression of the body of the child, whenever the uterus is large in size, it should be made by the hands of the assistant standing or kneeling by the bedside, facing the patient's lower extremities, the palms of

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both hands upon the uterine fundus, the thumbs and the balls of the hands together upon its centre, the fingers snugly encompassing the body and the sides. The line of pressure varies with the plane of the pelvis occupied by the part to be expressed, and should be made firmly during a pain or during the efforts at traction. Is is a steady pressure in the direction of the pelvic axis, usually made either to aid the entry of the head into the inlet, straightening the oblique position of the womb and forcing the head to descend, or to assist the abdominal muscles during its expulsion; but, above all, to aid in the delivery of the shoulders and after-coming head.

Of these external manipulations, both massage and expression are valuable factors in the management of ordinary labor. Friction, to arouse labor pains and correct them if irregular, mitigate suffering and augment their force, especially in the first stage of labor, though useful also in the second or third. Massage, kneading and compression become of service as labor progresses, as friction is less applicable and the womb diminishes in size; to improve and strengthen, to stimulate the efforts of the uterine muscle, both during labor proper, the second and third stage, as well as after expulsion of the placenta to effect permanent contraction—the latter being, perhaps, one of its most important objects. Expression is resorted to in aid of the abdominal muscles, indirectly of the uterine muscle. It heightens the effect of abdominal pressure; it fixes the uterine fundus, aids the muscular contractions, and keeps up the effect during their interval; it is of service in rectifying the obliquity of the womb, in directing the presenting part into the pelvic inlet, in forcing it through the outlet, but especially in the expulsion of the shoulders and after-coming head, and in delivery of the placenta.

Treatment of Granular Eyelids with Jequirity.—In the *Chicago Medical Journal and Examiner*, February, 1884, Dr. F. C. Hotz, of Chicago, in a very practical and interesting paper, read before the Chicago Medical Society, December 3, 1883, details his experience with jequirity in the treatment of granular eyelids. After giving a short description of the introduction of the remedy into European practice he says:

I began my experiments in July. At first a 2-per-cent. infusion was used twice or three times daily for two or three days, according to the severity of the reaction produced. Later on (after I had read Dr. Wecker's paper in the July

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number of the *Klin. Monatsblötter*, where he recommended the 5-per-cent. infusion), the strength of the infusion was increased to 5 per cent., but the number of applications reduced to one per day, and with this stronger lotion two applications (and in a few cases even one) were sufficient to produce the typical jequirity inflammation. The infusion was applied upon the conjunctiva of the everted eyelids by means of a camel's-hair brush.

The application itself was entirely painless, and not till six or eight hours later did the patient begin to feel the action of the medicine, by pain and irritation of his eyes. After twenty-four hours there always was already more or less œdema of the eyelids, much redness and swelling of the conjunctiva, discharge of a muco-purulent character, and the patient complained of considerable pain and great tenderness of the eye. Under these circumstances the everting of the upper lids for making the second application of the medicine was very difficult and painful, but the medicine itself, also then, caused no pain. The night following the second application was the worst time for the patient. He suffered agonies of pain and walked the floor unless given a large dose of an opiate, and in sensitive persons the violent local inflammation reacted upon the whole system, causing fever and general malaise. The swelling of the eyelids attained such enormous dimensions, that eyelashes and lid-borders were completely invisible, and it became exceedingly difficult to open the eye. The tarsal and retro-tarsal conjunctiva was covered with a thick, white coat of a croupous exudation; the ocular conjunctiva was very red and swollen, so that it projected far over the margin of the cornea. The cornea always showed remarkable changes; where it had been vascular and hazy before the treatment, it was more so now, and where it had been transparent before, it became dull, lusterless, and gray.

Those symptoms of the fully developed jequirity ophthalmia are frightful indeed, and may fill the mind with anxiety for the safety of the eye; and time and again have physicians, when looking at such an eye, betrayed, either by the expression of their faces or by remarks, that they entertained serious doubts regarding the harmlessness of the treatment, any assurances to the contrary notwithstanding. But if this condition of the eye can alarm the physician, how must it frighten the patient if he was not prepared for it! I have, therefore, told every patient, before I applied the remedy, that it would inflame his eyes very badly, and that he would suffer con-

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siderably for one day; but at the same time I gave him the firm assurance that there was not the least danger, that his eye would safely get over the inflammation in a few days, and then quickly get well. I made it a rule to give this information and explanation in every case, and I have good reasons for being satisfied with having done so, and I would recommend this rule to every one who wishes to use jequirity. It has a wonderful, strengthening effect upon the faith and moral courage of the patient, when he hears his physician speak of the direct effect and the ultimate result of the proposed treatment in such precise and positive terms, and his faith in your medical experience will become unbounded when he finds afterwards that everything passed off exactly as you predicted.

When the typical effect of the jequirity, the croupous-blennorhœal ophthalmia, was obtained, the remedy was discontinued. The patient remained in his room for two or three days, bathing his eyes frequently with water to remove the discharge. When the pain was unusually severe and the swelling excessive, ice-cold compresses were applied during the day, and opiates given at night. Pain and swelling, however, subsided always very quickly, the pain seldom lasting more that twenty-four hours; and two days after the last treatment the œdema of the eyelids had usually pretty well disappeared. The croupous exudation was then thrown off, and within one week the eye had recovered from the immediate effect of the jequirity treatment.

During this time already, but more so in the second and third weeks, the wonderful effect of jequirity upon the granulations of the conjunctiva and the pannus of the cornea became manifest. In the successful cases, at the end of the third week, the conjunctiva was as nearly normal as was possible under the circumstances; or, in other words, the few treatments thoroughly eradicated the granulations, and removed all thickening and roughness of the conjunctiva; but, of course, they could not remove atrophic patches and cicatrices previously produced in the conjunctiva by the disease.

The action of jequirity seemed equally effective whether enlarged papillæ or lymph follicles constituted the predominant feature of the granular disease. I paid especial attention to this point, but failed to discover any marked difference; most cases of the papillary type were cured by the first jequiritization, a few required a second course of the same treatment; but the same can be said of the follicular and of the

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mixed forms. Only one case (Grimm) with well developed granulations (papillary form) was not benefited by the treatment, though it produced a very severe and typical jequirity ophthalmia. But I am inclined to attribute this failure to the fact that at the time of jequiritization the eyes were in the state of acute inflammation, a very severe acute relapse of inflammation just having attacked the lids and the cornea. We know that acute granular conjunctivitis and acute keratitis (pannus) do not tolerate the application of stimulants or irritants. This has been the universal experience with all the various modes of treatment heretofore, and I believe jequirity will prove no exception to this rule. In the case referred to it affirmed the rule; for it decidedly intensified and prolonged the acute inflammation. After this experience I have always subdued every symptom of acute inflammation by the frequent use of ice-water compresses before the jequirity was applied, and I have not had another failure since.

There is another class of cases which received no benefit from jequirity. But they really do not belong to the class of granular eyelids; they are a peculiar form of catarrhal conjunctivitis, its peculiar feature being this: That the inflammation affects chiefly the retro-tarsal portion of the conjunctiva. This portion is infiltrated, swollen, succulent and sometimes thickly studded with lymph-follicles, while the tarsal conjunctiva is smooth and thin, showing perhaps only a few isolated small follicles. I treated three cases of this kind with jequirity, and none were materially benefited by the treatment.

Now, what was the effect of jequiritization on the cornea? In the first place, I will say, that my experience fully agrees with Dr. Wecker's in this important fact, to-wit: That in no case the cornea received the least injury or damage from the effect of jequirity. It was used upon eyes with normal corneæ as well as upon eyes with ulcerations, pannus, leucoma of the cornea; but not in one single instance have I noticed any ill effect. During the acme of jequirity ophthalmia, it is true, the cornea became gray and dull, but with the subsidence of the inflammation it always recovered its normal transparency and bright lustre. Corneal ulcers neither got any worse nor was their repair materially promoted by jequirity.

Non-vascular opacities of the cornea (leucoma) were not affected at all. But most remarkable was the effect upon the vascular opacities (pannus) of the cornea. I saw the densest pannus which had reduced the sight to the bare perception

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of light (just about as much as you can see through your closed eyelids) clear away within two weeks so much that the patient could easily walk alone, and decipher large type. This result was obtained in cases which, for many months past, had shown no sign of improvement, though no remedy was left untried save the operation of peritomy and the inoculation of blennorrhœa. And, indeed, it seemed to me that these cases of inveterate pannus, which resisted all other medicines, yielded the best results; here the jequirity accomplished wonderful changes and showed its virtues in the most brilliant light. The first favorable sign, I always noticed, was the brighter luster of the cornea; then the blood vessels on its surface became thinner and receded gradually from the center to the margin, while the epithelial layers of the cornea became visibly clearer.

So successful was the effect of the jequirity upon the cornea that only in three eyes out of thirty-six it failed to remove the pannus. In one eye the conjunctiva was so atrophied that the 5-per-cent. lotion of jequirity could not produce any inflammation, though it was used every day during a whole week. The other two eyes were those of that patient (Grimm) mentioned aboved, which were treated while in the state of acute inflammation.

Summing up my experience gathered from the study of 65 eyes (50 in the Eye and Ear Infirmary, 15 in private practice) which I treated with jequirity from July to November, I can express it in the following propositions:

1. Jequirity is the best known remedy for the chronic granular conjunctivitis.

2. It is the most effective remedy for the clearing of trachomatous pannus, and in inveterate forms of pannus it is preferable to peritomy, as well as to the inoculation of blennorrhœal virus, because it does its work quicker than the operation, and safer than the inoculation.

3. It has no injurious effect upon the eye, and can be used with perfect safety, even when the cornea is ulcerated.

4. But it should not be used while the cornea and conjunctiva are acutely inflamed.

5. It does not benefit those cases of chronic conjunctivitis in which the symptoms of catarrh (increased secretion, succulence of the retro-tarsal folds, etc.) predominate over those of trachoma (enlarged papillæ, and lymph follicles, plastic infiltration tarsal conjunctiva).

6. The most violent attacks of jequirity ophthalmia accomplish the speediest cures of granulated eyelids and the quickest clearing up of the vascular cornea.

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Book Notices, &c.

Conversations upon the Physical and Mental Hygiene of Girlhood, with a Supplement upon What Constitutes the True Woman. By THOS. S. POWELL, M. D., Professor of Obstetrics and Diseases of Women and Children, and Lecturer on Medical Ethics and Medical Literature, in the Southern Medical College, Atlanta, Ga., etc. 1881. Pp. 84. 8vo. Paper. (From Author.)

This pamphlet is a reprint of a serial paper which appeared in some of the late numbers of the *Southern Medical Record*. Not only is it very desirable, but it is suggestive of many good lessons too much overlooked in this day. When one becomes the established "family physician," as Dr. Powell forcibly points out, there are duties encumbent upon the conscientious practitioner beyond the mere answer to summons to prescribe. Many a conversation relating to hygienic affairs of the family might prove as useful in preserving health as may be his prescriptions in restoring it when impaired. Especially is this the case with our growing up daughters and young ladies. But in this fickle, frolicsome day, we fear that the relation of truly-established "family practice" does not exist as ought to be the case. Under such circumstances, we are left only to say that such a book as this ought to be in every household where young ladies are to be taught. If mothers were to read this book attentively, they would save their daughters many an ache and broken down health, and themselves much avoidable anxiety. We trust our subscribers will recommend it to their patrons, and persuade them to follow the lessons it teaches. We would be glad to learn of its popularization among the mothers of the land.

The Wasting Diseases of Children. By EUSTACE SMITH, M. D., Lond. etc., etc. Fourth Edition. 8vo. Cloth, $3.00. Philadelphia. P. Blakiston, Son & Co. 1884.

This is a very decided improvement on the first edition of this work, which appeared some ten or fifteen years ago; and indeed an improvement on the third edition of 1878. Some of the more important additions and revisions are, notably, the methods of hand rearing of infants; the treatment of chronic vomiting, and of tape-worm; the pathology and morbid anatomy of rickets, and of hereditary syphilis. The diet tables of the present edition are also a very great im-

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provement, suggesting simple materials which are easily prepared.

As physician to the East London Children's Hospital and to the Victoria Park Hospital, the author has had ample opportunities for thoroughly investigating children's diseases, and an attentive study of his book will show that he has not allowed these opportunities to go unimproved. The book is written in good, honest plain English; each subject is made clear, and almost every page presents some new thought and valuable suggestion to the reader. It is a companion volume to "Meigs and Pepper" and "Day."—W. G. E.

Editorial.

OUR ADVERTISERS.

In fulfillment of the promise made in our January number, we continue our special notice of advertisers, and trust that by so doing we confer a favor upon our subscribers.

Scheffer's Pepsin retains its popularity despite the many other digestive agents now offered to the profession, and the saccharated pepsin especially, prepared by Mr. Scheffer, has no successful rival.

Hydroleine although its manufacturers modestly call it a hydrated oil, is really a mixture of pure cod liver oil, with pancreatin, soda, boric and hyocholic acids in addition to distilled water, and is tolerated to a remarkable degree by patients whose stomachs are too delicate to digest the oil alone. We have witnessed several instances of this fact ourselves, and speak *ex-cathedra*. The digestion of the oil being partly effected by its treatment as mentioned, it is readily assimilated by the human system, and the good effects of the cod liver oil are more speedily manifest in phthisis and kindred diseases than is those cases where the plain oil is taken.

M. J. Breitenbach, successor to A. C. Dung, New York City, imports and sells all of Lœflund's Preparations, and offers Lœflund's extracts of Malt, and Infant Food as standing at the head of all manufactures of like nature. The former are much used in German hospitals, and the latter is made after the exact method prescribed by the great Liebig. Mr. Breitenbach also manufactures the Elixir of the Hypophosphite Iron Compound (Dr. Pæps formula), which is an

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elegant combination of iron, quinia, and strychnia, with manganese, lime, and sodium, forming a tonic which is admirably suited to patients on the down grade of life, afflicted with any of the wasting forms of disease. The compound is prepared not only with the view of making a valuable tonic, but a palatable one, and it is only just to say that the manufacturer has fully succeeded.

Tongaline.—This, the new remedy for neuralgia and rheumatism, has become a general necessity among those of the profession who have given it a fair trial; and from what little experience we have had with it, we can fully recommend its use in all neuralgic affections. It is a combination of the Figian tonga with some of the more powerful salicylates. The manufacturer is A. A. Mellier of St. Louis, who also makes Elliott's saddle bag, which has been adopted for general use by the United States Government.

Bromo-Chloralum.—This antiseptic and disinfectant is one which has been before the public for some time, and its value may be understood when it is known that the New York Commissioner of Emigration employ it extensively in the great rotunda of Castle Garden, where thousands of steerage passengers of all nations are landed monthly. They found that it was the only disinfectant which could be successfully and economically used to keep down the intolerable odors of the room. Its value in scarlet fever and diphtheria, sprinkled about the sick-room, and used diluted as a gargle for the throat, has been thoroughly tested, with the best results.

Scott & Browne, manufacturing chemists, of New York, make a specialty of producing an emulsion of cod liver oil with hypophosphites. Their great care in selecting the oil, and in the making the combination, is amply proven by the high therapeutic value set upon the emulsion by the profession. It is no new remedy, but has been steadily growing in demand during a number of years. In cases of scrofulous children it acts almost as a specific. The same firm offer a buckthorn cordial for use in constipation, and a very elegant palatable castor oil, the latter being pure oil emulsified with chemically pure glycerine. We can speak of its merits from experience with it.

Foote & Swift offer to the profession a new method of local applications, called vector cum suppositiorio. It is a soluble suppository placed on the end of a pure copper wire, the later being so flexible that it can be given any desired curve, so that the suppository may be fixed in any portion of the usethral, uterine or nasal cavities desired, until dis-

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solved—or may be withdrawn before complete solution when only a mild action is required. The three great points secured by this form of medication are, immediate action at the point desired, cleanliness and convenience, and perfect control of the medicament. Those physicians who have tried the vectores are enthusiastic in their praise.

White, Williams & Co., of Boston, Mass., make a reverse corset for preventing and overcoming uterine disease. In cases of functional derangement, the corset is particularly useful on account of the full support it gives, and the same may be said of its employment during pregnancy. Each one is made to order, from glove kid and calf, thus ensuring a perfect fit.

Faulkner & Craighill manufacture the well-known Camm's emulsion of cod liver oil, and claim superiority for it on account of its entire freedom from alkalies. They use pancreatine to partially emulsify the oil, believing that it is best to leave some of the digestive work for the stomach to perform. The hypophosphites are thoroughly dissolved in the mixture, there being no sediment to be seen even after long keeping. As the house is located in Lynchburg, Virginia doctors should be specially interested in this preparation, and if those practising in the country are as well satisfied with it on trial as the practitioners of this city, Faulkner & Craighill will be pushed to the utmost to supply the demand.

H. Planten & Son, of New York City, still makes the celebrated Planten's capsules, empty and filled, and it is not to be wondered at that the capsules have become favorites with the profession, when it is known that nearly fifty years have elapsed since Mr. Planten began their manufacture. Beginning with a very small supply, the demand has grown so of late years, that special machiney has been invented for the purpose of more rapidly manufacturing them. The late Prof. Van Buren employed them to a large extent in genito-urinary difficulties, and we venture to say that every physician who has used the filled capsules made by this firm has found them to be exactly as represented.

Elixir Ferri et Calcis Phosph. Co.—This combination of lacto-phosphates is prepared by Dr. T. B. Wheeler, of Montreal, Can., after the formula of Dr. Busart, of Paris, and is a nearly perfect chemical and nutritive tonic. It is claimed that phosphorus can only be distributed through the organism in the form of lime phosphate, and it was this belief that induced Dr. Busart to experiment until he succeeded in perfecting this formula. No substitute seems to take its place-

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and any practitioner desirous of a positive food for the nervous system should certainly give the preference to Dr. Wheeler's elixir.

Damiana.—Dr. F. O. St. Clair, (late Helmick & Co.,) of Washington, D. C., was the first to introduce this valuable aphrodisiac to the notice of the profession, and having special advantages for procuring the pure drug, his fluid extract of damiana stands at the head of preparations of the kind. Every medical reader will have noticed during the past nine years, that when an extremely favorable result of the employment of this drug has been recounted, the medicine originally from this house, and to those who desire to employ a special sexual tonic for either sex, and have not tried this, we confidently recommend it.

T. Roberts Baker.—It is scarcely worth while to mention this old established house to our Virginia readers, as the former firm name of Meade & Baker was known to every physician in the State, and was taken as the synonym of pure pharmaceutical products. It is enough to say to our Southern friends that the business is still carried on as before, with the addition of the natural improvements that are suggested by later discoveries and inventions, and increased experience in the dispensing of the drugs.

Polk Miller & Co., while still handling all the drugs possible to be used in city or country practice, are making a specialty of an improved compound cathartic pill of their own make, specially adapted to the use of the country physician. We would refer our readers to their advertisement, and think they will be pleased with both the composition and the price. This firm also make a gentian and iron tonic, which for palatability and efficiency we can recommend from personal experience of its value.

Wolf-Trap Water.—This diuretic, anti-dyspeptic, and aperient water is most valuable in all forms of bladder and kidney derangements. It is one of the best of the lithia waters with which this State is so bountifully supplied by nature, and gives excellent results in certain forms of dyspeptic affections. We earnestly beg all physicians who employ waters of like nature to give this a trial, feeling confident that entire satisfaction will be given in cases properly chosen for its employment. Its price places it within reach of all. The agents, Messrs. Purcell, Ladd & Co., of this city, who are the largest wholesale drug dealers in the South, will take pleasure in mailing analysis, and other information concerning the water, to any one on application.

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Ayres' Hernia Truss, despite the many other forms of relief for the unpleasant affection of rupture, is still presented by the inventor's successor, with the confident belief that it is excelled by none yet offered to the profession, and he has the best reason for his belief in the fact that some of the most prominent surgeons in the country employ it constantly in their practice. Dr. Hunter McGuire says of it: "It is the best I have ever seen for hernia in its various forms." Purcell, Ladd & Co., agents.

McIntosh Combined Galvanic and Faradic Battery.—This first and only portable battery which gives both the galvanic and faradic current, has proven of great service not only to the specialist, but also to the general practitioner, and it has given such universal satisfaction wherever employed, that its sales have extended among the profession in Europe as well as in this country, and here it has been adopted by the government. The combination of two batteries in one case though apparently somewhat complicated, is in reality extremely simple, and the claim of the makers that it weighs less, occupies less space, and gives a current of greater intensity than any other battery, is well authenticated. Every physician who can possibly procure one, should do so at once. It is manufactured by the McIntosh Co., Chicago, Ill.

McIntosh's Natural Uterine Supporter is an instrument admirably adapted for overcoming all ordinary forms of uterine displacement, and the makers point to the fact that it has come into more general use than all other instruments of the kind combined, as an evidence of its great superiority. Our space does not allow us to say more concerning this invention, except that we are sure that any doctor employing it will feel repaid by the ease of his patient. Made by the McIntosh Supporter Co., Chicago, Ill.

Bunn's Uterine Supporter.—We ask our readers to examine carefully the advertisement of the above invention. The instrument is in accord with an exact theory of uterine support, and we are assured that it is in every way a success. Send to Dr. D. B. Bunn for one and report to him your failures if you have any with it.

Celerina.—I have been using "Celerina in my practice very extensively for two years, *and in sexual debility and nervous diseases it produces excellent effects.* Think I have used at least one thousand bottles.—*E. N. Fishblatt, M. D., Cedar Rapids, Ia., Dec.* 13, 1882.

Celerina is a combination of drugs which meets all the requirements of a first-class prescription; it is efficient, agree-

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able and safe. I have used it in two cases of neurasthenia, with highly satisfactory results, and shall give it still further trial.—*H. A. Cottell, M. D., Demonstrator of Anatomy, Microscopy, and Medical Chemistry, University of Louisville.*

I have used Celerina in my practice, and find it to be an excellent nerve tonic.—*C. W. Null, M. D., Prof. of Physiology in Louisville Medical College, and Jefferson School of Medicine.*

The Medical Association of Alexandria, Va., at its meeting in January, 1884, elected Dr. William Gibson, President, and Dr. Bedford Brown, Secretary. The time has come when corporation and county medical societies should become numerous and useful in Virginia, as they are proving to be in other States.

Dr. Henry Latham, of Lynchburg, Va., Ex-President and Honorary Fellow of the Medical Society of Virginia, we regret to learn, was stricken with paralysis during the early part of January. We fear he will not be able to resume professional work, even should he recover from his present illness, as he is over seventy-five years of age.

Messrs. P. Blakiston, Son & Co., Medical Publishers, 1012 Walnut St., Philadelphia, Pa., have been appointed the American Agents for that time-honored, excellent and popular London weekly, the *Medical Times and Gazette.* Price per annum, $4.

Dr. Edward Warren, Bey, who was Surgeon to the Army of the Egyptian Khedive, and who, after resigning that post on account of impaired health, moved to Paris, where he has won many laurels, and enjoys a large and lucrative practice, arrived in New York, on the steamship, Arizona, January 22d. He proceeded at once to the home of his brother, Capt. Harry Innes Warren, of Fredericksburg, Va., whom he is now visiting. Dr. Warren is a North Carolinian by birth; was a surgeon of eminence in the Confederate service, and after the war settled in Baltimore, where he gained a reputation of national extent. From Baltimore he went to Egypt. His old friends will be glad to grasp his hand and to welcome "home again."

Small-pox is reported to be prevailing to an "alarming extent" in Girardsville, Pa., at this time. In some of our

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Western States, also, this scourge is increasing. Let our subscribers take the warning, and lose no time in seeing that their patients are properly vaccinated. Some are resting upon their oars, forgetting that many babies have been born since the epidemic of a couple of years ago, and that many of them have not been vaccinated.

Dr. Edward J. Bermingham, according to the *New York Medical Journal*, "who has been doing a medical publishing business in Union Square [New York] under the firm name of Bermingham & Co., is reported to have made an assignment to Frederick S. Lyons." This firm has recently published some excellent standard works; but as we thought at the time their prices were too low for living profit. We are glad to hear, however, that the house has been re-opened and will continue the publication business.

Subscribers to the Virginia Medical Monthly will please note the fact that a partnership of Editors and Proprietors has been made. Such as are in arrears will please respond at once to bills now being sent out in order that all accounts prior to January 1st, 1884, may be promptly settled and the old books closed. Those whose subscriptions expire with the December No., 1883, and who propose to continue, will please be as prompt in remitting $3 for the current year. Now that better arrangements than ever have been made to keep this journal in the front rank of American medical monthlies, and as more vigorous efforts are being put forth to deserve increase of patronage, it is hoped that subscribers everywhere will lend a helping hand. With your own renewal, send in a new subscription. Let us have practical papers, that may be read before medical societies, clinical reports, notes, medical news items, etc. Material delays in issue of the *Monthly* will not hereafter occur. Much of the delay in the issue of this number has been due to the perfection of plans to prevent the like again. The Editors enter, heart and hand, into the enterprise, with a determination to merit success.

St. Luke's Home for the Sick.—This institution is one of the few private hospitals of the country which has been uniformly successful, since the opening of its doors in the Spring of 1883. The government of the "Home" is vested in a body of ladies whose social standing is of the highest, and whose private charities have made their names known

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throughout our city. The discipline of the institution is administered on the broad platform of Christian feeling.

Almost before the ladies who organized the institution were prepared, there were more applications for admission than could be cared for at the time, and notwithstanding the fact that more space has been added from time to time since then, until the building now contains almost twice as much room as at first, there is at present not a vacant room in the Home. The capacity of the building is for about forty patients. It aims to be a boarding-house where sick people can receive the best care at the lowest rates, and something more, as all profits derived from the management are employed for the establishment of free beds for the indigent sick. That such an institution could be so successfully filled in so short a space of time, is not only due to the hard work of the lady managers, but also to the reputation and personal attention, of the surgeon in charge, Dr. Hunter McGuire. His name and fame have drawn patients to this city from nearly every State, and there is hardly a capital operation which he has not performed in the Home during the short time elapsing since it was opened—mainly with success. Dr. McGuire's assistants are Drs. Hugh M. Taylor and Lewis Wheat, and the matron of the institution is Mrs. Alice Tyler. May it long enjoy the success it so amply merits.

Dr. Robert T. Coleman, Professor of Obstetrics in the Medical College of Virginia, we regret to announce, is lying dangerously ill at his home in this city. For the past month he has been unable to perform his duties as a member of the Faculty—his course of instruction having been assigned to another. It is not expected that he will soon be able to reenter upon his professional duties, if, indeed, he can safely return to professional work for a long while.

The New York Post-Graduate Medical School has been so successful that on or about February 1, 1884, it will move to a new building which will enable it to give hospital advantages to its matriculates. The new building is very large, being five stories high, and having a front of ninety-five feet. The new announcement gives a list of 140 physicians who were matriculates during the year ending November 1, 1883.

Dr. John R. Wheat has resigned his position as Superintendent of the "Retreat for the Sick," of this city. He occupied this responsible office for several years.

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Drainage of the Brain.—The New York dailies tell of a German named Bruno Knorr, who attempted suicide, January 24th, in that city by shooting himself through the centre of the forehead with a French self-cocking, 32-calibre, revolver. After being shot, he only said, "I have no money," and immediately became unconscious. He was taken to Bellevue Hospital. The injured portion of the brain was oozing out through the wound. Drs. Flecher and Morris, of the Hospital staff, examined the wound, and trephined the skull over the wound. The probe passed so far backwards, that it was determined to make a counter-opening with the trephine, opposite the point of the probe. Just below this posterior opening the bullet was found in the brain and removed. Then a drainage tube was passed through the brain along the track of the ball—the ends of the tube projecting an inch through each opening in the skull. Since the operation, the patient has been constantly improving, although he is still stupid and semi-unconscious. When spoken to, he opens his eyes, and when asked if he wishes water, can answer yes or no. The Hospital surgeons hope to save the life of the unfortunate man; his symptoms are watched constantly, and his temperature is taken every two hours. His right arm seems to be partially paralyzed. Careful notes are being kept, and Dr. Flecher expects to present a full report at the conclusion of the case to the New York Surgical Society. The operation is unique, and if it proves successful will encourage bolder measures than have heretofore been attempted in many surgical cases.

Quarantine Fees.—An important decision was rendered by the Supreme Court of Louisiana, January 21, 1884, to the effect that the State has a right to extract quarantine fees of vessels inspected—whether they are quarantined or not. The quarantine laws of that State are held not to infringe the powers of Congress to regulate commerce. The title of the case is "No. 8755—Morgan's Louisiana and Texas Railroad and Steamship Company *versus* the Board of Health of the State of Louisiana. Appeal from the Civil District Court, Parish of Orleans." Associate Justice Feroner delivered the opinion. This decision may be of importance to some of our maritime Boards of Health.

Almost Instant Relief of Earache is afforded, it is said, by the following simple method:—Put five drops of chloroform on a little cotton wool in the bowl of a *clay pipe;* then blow the vapor through the stem into the aching ear.

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Obituary Record.

Dr. Magnus Muse Lewis died at his home in Alexandria, Va., January 19th, 1884. He was born in Jefferson county, now *West* Virginia, February 8th, 1824; hence he was nearly sixty years of age at the time of his death. He studied medicine at the University of Virginia, but took his diploma as Doctor of Medicine from the Jefferson Medical College of Philadelphia in 1847. Soon afterwards, he began practice in Alexandria, Va., where he has since resided, except when his home was broken up by the war between the States, when he was a Surgeon in the Confederate service. Most of his professional life has been devoted to surgery, and as a surgeon he had few superiors, although his reputation was much more limited than that of many not his equal. This is alone attributable to the fact that he scarcely ever contributed anything to the medical press, and confined his personal practice mostly to private patients rather than enter hospital wards. His successes, however, were notorious in his community, and many of those who have been with him as assistants bear testimony to the originality and brilliancy of his operations. He was too modest for his ability. He was a member of the American Medical Association, a Fellow of the Medical Society of Virginia, and was connected, either as an active or an Honorary Member, with several other Societies. While always manifesting interest in the success of his State Society, as an illustration of his modesty, we may mention the fact that when the Society met in Alexandria a few years ago, the honor of its Presidency was unanimously tendered him, but he declined the compliment from no other consideration than that he thought others more worthy of the honor.

Dr. Lewis was the son of the late Dr. John H. Lewis, of Jefferson county, West Va.—himself a physician of talent and excellent reputation. In 1855 he married the youngest daughter of John H. Brent, Esq., of Alexandria, who survives him. His circle of acquaintances was large and influential. He was a man of positive opinions, though he was not at all aggressive in announcing them. Some were jealous of him, but those who knew him well could not help honoring and loving him. He was a great man, and the influences of his life have gone out to others for good. He was genial in the social circle, kind and affectionate in his domestic relationships, generous to the needy and brave in the face of danger. Virginia has lost much by his death.

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RICHMOND, MARCH, 1884.

Original Communications.

ART. I.—**Chronic Ulcer of the Stomach.*** By LANDON B. EDWARDS, M. D., Richmond, Va.

Synonyms.—The common synonyms of the disease to which this paper is devoted are "chronic," "round," "simple," "perforating," "solitary," "digestive," "peptic," and "eroding gastric ulcer." But as no one of these terms is descriptive of all cases, and as I am unable to suggest a more perfect nomenclature, I shall satisfy myself with the old names—*chronic, simple or perforating ulcer of the stomach*—as may best subserve my immediate purpose.

* The author apologizes for publishing this paper in the journal of which he is the Editor, with the simple explanation that he has been requested to do so. The paper was prepared some months ago to be read, by invitation, before the Piedmont [Va.] Medical Association, at Orange, Va., but the writer was unexpectedly prevented from attending the meeting of the Association. It has, however, been read before the Richmond Medical and Surgical Society.

If this paper has any merit, it consists in the recommendation of chloral-hydrate as a remedy for the disease. The writer, has treated only three cases with this agent; but each of these has so singularly been restored to health, that he has thought it well to mention this point. He has searched the *Index Medicus* and the *Index Catalogue of the Surgeon-General's Office*, so far as yet published, and has, as carefully as his time would allow, examined the many exchanges, books, society transactions, etc., that regularly come into this office, without having found a suggestion as to the use of chloral in chronic gastric ulcer. In view of the fact that well-defined chronic gastric ulcer is generally so fatal under almost any treatment—so fatal, indeed, as to be classed "as first cousin of cancer of the stomach"—the author has persuaded himself that perhaps the suggestion might be worthy of trial by others. He hopes that any who may follow out the plan of treatment he has so successfully depended on will report their cases in order to verify a truth, or to overthrow a recommendation based on a success that possibly may have been accidental or incidental.—E.

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Definition.—Chronic gastric ulcer is simply a circumscribed, progressive molecular necrosis, without suppuration, attacking first the mucous tissue of the stomach, and exhibiting a tendency to extend, perpendicularly to the surface originally affected, through its muscular and peritoneal coats. It has no anologues, unless we except the rare variety of corroding ulcer of the cervix uteri, described by Leube, Clarke, and Klebs, and also the necrotic ulcer of the cæcum mentioned by Bartholow.

Literature.—Galen recognized the existence of this disease; and Celsus is said to have laid down rules for its treatment, the general principles of which hold good to this day. In 1694, Grassius described a perforating gastric ulcer, as seen post-mortem. In 1704, Littré traced the source of a fatal hæmorrhage to a round ulcer of the stomach. Matthew Baillie's work on *Morbid Anatomy*, etc., published in 1793, contains a special chapter on the subject. But although simple ulcer of the stomach was encountered frequently enough in practice, and was recognized in autopsies, it was reserved for Cruveilhier, in his great work on *Pathological Anatomy*, in 1830, to distinctly separate it from cancer of the stomach, with which it had, until his day, been confounded. Rokitansky followed the announcement by patient research and careful original investigations; and in 1839, he named the disease, "perforating ulcer of the stomach." Dr. William Brinton, of London, in 1856 and 1857, added important statistical information, from which he drew many practical deductions; and contemporaneously and since his contributions, many able pathologists and physicians, the world over, have devoted special study upon it, until now the disease forms the subject of a chapter in almost every well established text-book on practice of medicine.

Morbid Anatomy.—Gastric ulcer is usually single; but cases have been reported where three, four and even more of the characteristic sores have occurred. When these coalesce, the shape of the sore becomes irregular. But in its earliest stage of recognition, the lesion appears as a round or oval spot of necrosis of the mucous membrane, and presents no sign of suppuration; nor is there usually evidence of sur-

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rounding inflammation, although the edges of the formed ulcer are generally thickened and hardened. In a short while the slough drops out, leaving a hole, as if punched, through the mucous membrane. The muscular coat then forms the base of the ulcer. The peculiar tendency of this sore being to extend deeper and deeper, rather than laterally, we next notice a puncture, as it were, through the muscular tissue, exposing the serous coat of the stomach as the base. In the further progress of the case this peritoneal investment is perforated. The opening through the muscular coat is somewhat smaller in diameter than that in the mucous membrane; and the perforation of the serous tunic has a smaller diameter than that of the muscular structure —thus giving the completed perforating ulcer a gradient, or bevelled or funnel-shaped outline, with the apex pointing through the peritoneum. Each coating, as perforated, has a punched-out appearance.

The size of a gastric ulcer usually varies from that of a split pea to that of a silver quarter; sometimes it is much larger. The largest one recorded was seen by Cruveilhier; that was as large as the palm of the hand. When the ulceration proceeds superficially, it does so transversely, along the course of the blood-vessels. Sometimes it even engirdles the stomach.

By far the most frequent *site* of a chronic ulcer is the posterior wall of the smaller curvature, near the pyloric orifice. It much more rarely occurs in the anterior wall. But although it may develop in any section of the stomach, it is never found beyond the terminal portion of the œsophagus, on the one hand, nor materially below the duodenal opening, on the other.

Terminations. — The progress of the ulceration may be checked before all the coats of the stomach have been perforated. If only the mucous, or the mucous and muscular tunics are involved, repair may take place by granulation. The resulting cicatrix will have a puckered appearance. If the healing process sets in after the peritoneum is attacked, but before a hole has been eaten through it, the cicatrization of the neoplastic connective tissue will contract the perito-

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neum into a stellate figure; and the resulting firm, fibrous cicatrix proper has often been mistaken for scirrhus. If the ulcer was multiple, or very large, and situated about the smaller curvature, the cicatricial contraction often results in incurable stricture of the pyloric portion. If the ulcer perforates the serous coat, and opens into the peritoneal cavity, rapidly fatal peritonitis is almost sure to follow.

But, fortunately, in the majority of cases of even fully perforating ulcer, as the ulcerative process begins in the serous coat, a local or circumscribed peritonitis occurs immediately opposite the gastric erosion, and may implicate any contiguous organ. Inflammatory adhesions are thus formed between the organ so involved and the diseased section of the stomach. Now when perforation of the peritoneum results, the ulcer finds an agglutinated viscus as its base. If the inflammatory adhesions are broad enough and sufficiently unyielding around the margins, an opening into the cavity of the belly is prevented. As gastric ulcer most usually attacks the posterior wall, near the pylorus, the viscus generally thus fortunately joined to the affected part of the stomach is the pancreas. Sometimes the inflammatory union takes place with the colon, the omentum, the small intestine, the diaphragm and other abdominal structures. In very rare instances, when the ulcer is in the anterior gastric wall, fortuitous adhesions may form with the anterior abdominal wall, and thus prevent an opening into the abdominal cavity.

But the process of ulceration, begun in the stomach, when it has eaten through all the coats of that viscus, and opens upon the surface of an adherent organ or structure, does not always stop there. Sometimes the inflammatory bands or adhesions are neither broad nor strong enough to resist the lateral erosions of the ulcer; and either perforations or rents may take place in the adventitious material, and leave an opening through which the contents of the stomach pass into the peritoneal cavity—causing as speedy and as certain death as if the perforation had been direct.

If, however, the adhesions are sufficiently broad and firm, when the ulcerative process passes into them, the direction of the ulcer is no longer necessarily perpendicular to the

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stomach surface originally diseased. It may pursue circuitous routes, and leave tortuous fistulous tracks through the tissues or organs thus attacked. Thus the ulcer may eat its way through the adherent diaphragm; and if that muscle has become united with the lung by a sufficiently broad base, the fistulous track may lead into the pulmonary substance itself. Cases of pneumo-thorax, as also instances of gastro-colic fistulæ, so produced, have been recorded. Flint mentions sub-phrenic abscess as due to such extension. A fistulous track has formed through the anterior gastric wall and the adherent anterior abdominal wall. But it is unnecessary to multiply such illustrations of the results of perforating ulcer of the stomach.

Etiology. — First, as to the *frequency* of chronic gastric ulcer. Taking the compilations of many authors as the guide, it may be stated in round figures that either open ulcers or signs of pre-existing chronic ulcers of the stomach are observed in about one per cent. of all autopsies made. As to all causes of death reported in the United States, the proportion of cases of gastric ulceration is set down at about 40 per cent.; but as this proportion includes *all* forms of ulceration of the stomach, not cancerous in its nature, we may more safely estimate that the simple or perforating form of the disease causes death in about one-quarter of one per cent. of all cases of mortality tables examined.

Geographical Distribution.—The matter of frequency of the disease seems, however, to be modified in a marked degree by countries or sections of countries. Thus, the average number of cases in the practice of English physicians is stated at something less than four per cent.; whereas of all autopsies performed in Copenhagen, it appears that the disease proves fatal in the ratio of 13 per cent. as compared with all other causes of death. In Jena, the percentage is given as from 10 to 11. In Prague, where the largest number of autopsies have been studied in reference to this point, chronic ulcer of the stomach occurred in from 3 to 4 per cent. of all cases examined. In Berlin and Erlengen, the percentage is about 4½. As to the United States, from a compilation made by myself from the statistics of the States and cities, selected

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at random, representing a total population of 4,718,475, while, during one year, there were 63,401 deaths from all causes, there were only 51 deaths ascribed to gastric ulcer—a ratio of one death from this disease to 1,243 deaths from all other causes. Estimating that one fatal case of this disease represents three non-fatal cases, we would have this lesion occurring in about one individual in 23,080 of the population of one year. It thus appears that notwithstanding the fast living, etc., which have been accredited to Americans, they are far less frequently the subjects of the disease than persons residing in many other countries. It should, however, be added that autopsies are far more seldom and, as a rule, less systematically performed in the United States than in most of the European countries. We have undoubtedly in this paper rather under-estimated than over-calculated the proportion of cases occurring in the United Stated; but the calculations are based upon the best data at our command. I will add for the curious eye that our data consisted in the official reports of the States of Indiana and Michigan, and of the cities and towns of New York, Detroit, Richmond, Va., Albany, Charleston, New Haven, Memphis, Knoxville, Norfolk, Va., Nashville, and Burlington, Vt.

Race seems to have a predisposing influence. Thus in the cities of Richmond, Charleston, Memphis, Norfolk, Knoxville and Nashville, representing a total population of about 220,000, of the whole number of 6,692 deaths for one year, there were only three deaths from ulcer of the stomach, and all of the three were *whites*—none negroes. From incidental conversations had with practitioners who have had cases of chronic ulcer of the stomach under their care, I do not recall that any of the cases were stated to be in the colored race. While further inquiry is necessrry to determine the exact relative frequency of the disease in the two races, it seems to be a fact that the whites are the most frequent victims.

Sex.—When the disease occurs in persons under 35 years of age, females appear to be more frequently afflicted. When the disease occurs in persons over that age, sex does not have anything like a deciding influence. In females under 30 or 35, the most common form of attack is the direct perforating

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ulcer, which is also the most acute, as it is the most fatal, form of the disease.

Age.—The periods of life between 15 and 35 in the female, and between 20 and 40 in the male, are said by authorities to be those during which the lesion is most apt to develop. Children are not exempt from it, and no age, however advanced, is known at which it may not begin. But when it does occur in elderly persons, the risk of direct perforation decreases, although it is then more apt to be associated with some form of cancer.

Habits of life do not appear to have a definite relationship of cause and effect. It is rarely the result of the usual causes of other stomach diseases, unless, perhaps, we make an exception in reference to

Occupation.—No special occupation, however, seems to exert a *controlling* influence. But it is a singular fact that, in young females, the disease is more frequently met with in chlorotic needle women and servant girls. In some cases it has been traced to those occupations which require almost continuous pressure upon the epigastrium. Hence its relatively greater frequency among carpenters who use "brace-bit augurs," in shoemakers who press the point of the shoe against the pit of the stomach, and in those who are constantly leaning their bodies forward upon the edges of wash-tubs, sewing machines, working tables, or other like objects.

Associated Diseases.—Valvular heart troubles, atheromatous conditions of the arteries, and some kidney diseases have been noticed as the most frequent lesions of other organs associated with gastric ulcer. In many instances it is difficult to state which was the antecedent disease; but almost always one or the other of the lesions named, when it coexists, has been diagnosed after the recognition of the chronic ulcer. Sometimes central nervous lesions have been observed to precede the signs and symptoms of the grave gastric disease. Anæmia or spanæmia is a common precursor. Chlorosis and amenorrhœa, with painful menstruation whenever that comes on—especially in young women—often co exist with stomach ulcer, and are thought to be in a measure causative of the latter. Burns of the surface of the body

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are sometimes followed by ulcers of the stomach, although these "ulcers by sympathy" are more frequently to be found in the duodenum.

We purposely exclude other than a reference, in this connection, to *cancer* and some other diseases which are sometimes associated with gastric ulcer, as these diseases will be considered under the head of diagnosis.

Nature of the Disease.—From this compilation of facts, we are led to the conclusion that chronic or perforating ulcer of the stomach partakes more of the nature of an *idiopathic disease* than has heretofore been generally considered. At least, the specific cause is yet to be discovered. It is most probably an original sloughing beginning on the under or deeper surface of the *mucous* layer of the walls of the stomach, which *may* be ascribed to hæmorrhagic erosions. Its mode of origin is, therefore, different and distinct from ordinary or inflammatory ulcers of the stomach, which are due to disintegration of tissue, usually beginning from causes acting on the inner or superficial mucous surface.

Taking, then, Virchow's statement, I am led to believe with him that "the original seat of a chronic ulcer of the stomach corresponds to the territory supplied by an arterial branch;" and that the nature of the lesion is obstructive to the supply of blood to a definite spot or spots of the under surface of the gastric mucous membrane, and that a necrotic process consequently sets in, which eats a hole, as it were, through the mucous membrane, with a tendency to destroy, by the same necrotic process, the immediately underlying structures of the stomach. In support of this view, Foerster says "a limited stagnation or stasis of blood always precedes the formation of such an ulcer—a dark red, brown or black spot being first produced, which becomes necrotic, and then is coroded by the gastric juice." And "Parry has shown that ligation of some of the gastric arteries will lead to the digestive solution of the part involved." There can be no doubt, as Sieveking and Jones and others have suggested, that the gastric juices acts with corrosive effect upon necrotic tissue, and this may account for the fact that the ulcer first makes its way from the deeper to the superficial layer of the mucous tissue of the stomach.

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Symptoms.—Unquestionably the lesion is sometimes so superficial and so limited in area as to give rise to scarcely a recognizable sign or symptom. A slight dyspepsia after eating may be noticeable; but under favorable circumstances the ulcer may heal, and the symptoms pass away without having awakened a suspicion as to the real nature of the cause of the stomach uneasiness.

In cases of *suddenly perforating ulcer, without adhesions*—especially such as generally occurs in young chlorotic females, with amenorrhœa or dysmenorrhœa—the previous gastric symptoms were generally slight or altogether unnoticed, although the general health was impaired by the chlorosis, leucorrhœa, etc, True neuralgic, pains in the side and hysterical symptoms occurred. According to Habershon, "the onset of the fatal attack is unexpected, and is generally after slight muscular exertion or after eating a full meal. Intense pain comes on, followed by rapid prostration and shock. The skin becomes cold and clammy; the pulse falls; the pain in the abdomen becomes general; tympanites follows, and occasionally vomiting supervenes. Death follows in from five to twenty-four hours, although life is sometimes prolonged for several days, and, in rare cases, the patient recovers."

But leaving such cases aside, the true nature of which can scarcely be determined until the symptoms and signs of abdominal perforation begin, the chief signs of uncomplicated chronic ulcer are *pain, dyspepsia after eating, vomiting, hæmorrhage,* and *a peculiar color or complexion.*

To take a characteristic case: We are called to a patient under 40 yeaas of age on account of an intractable dyspepsia, with some of the usual attendants of indigestion. He wakes up in the morning feeling as if unsatisfactorily refreshed by the night's rest. The pain in the pit of the stomach, if at all remarked upon, is slight but somewhat gnawing in character. There is, however, always some discomfort about the stomach. This "sense of distress," as it has been termed, is specially noticeable after a meal, for appetite is not usually impaired at this early stage. In many instances, as also during a later stage of the disease, for some hours after meals

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—usually more intense an hour or so after—there is a dull, aching pain, sometimes spoken of as a gnawing toothache sensation, shooting through the body to the lower angle of one or the other scapula, or to a point in the back somewhere between the lower angles of the shoulder blades. Water brash and slight acid eructations are generally present; and almost always there is vomiting of the food recently ingested, with decided relief to the gastric uneasiness. Reflex phenomena develop, such as inveterate urticaria or other uncontrollable skin eruption; but antipruritics or the other remedies usually addressed to the treatment of cutaneous diseases clearly due to stomach disorders do not cure. The patient says these symptoms began so gradually, and progressed so insidiously that he can scarcely say when they were first noticed. The irritation of the stomach, which ordinary stomachics do not relieve, increases, and vomiting and retching become established. Worms are suspected, and vermifuges are given without benefit. Want of some one or other of the gastric juices is then presumed to be the cause, and pepsin and all sorts of physiological remedies are prescribed without improvement. Dietary regimen of different kinds is ordered; but it is soon demonstrated that it is not so much the quality of food that enters the stomach which distresses that organ as it is that almost anything—especially of a solid consistence—which may be swallowed causes or aggravates the train of symptoms. The countenance now assumes a worn or weary look, and the expression manifests despondence as well as physical discomfort. The anxious look peculiar to abdominal disease may occur, and emaciation progresses more and more. General tonics are taken but do no good. In many cases a peculiar waxen pallor, due to imperfect nutrition, is noticeable, which waxen color in some instances so closely resembles the sallowness of cancerous cachexia as to have been repeatedly mistaken for it, even by experienced practitioners. An examination of every organ except the stomach gives negative results; and we are gradually led to limit the disease to this organ, and to regard many of the wandering aches, nervous symptoms, skin troubles, the pain between the shoulders, etc.,

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simply as referred symptoms. The tip and edges of the tongue are usually slightly more florid than natural, while a thin, light, grayish coat covers the dorsal surface, which often wears away as the day advances. The pulse is not markedly affected one way or the other; and the thermometer discloses no material change of temperature. For anything, the temperatue, in a large total of cases, may be as much as a twentieth or even a tenth of a degree, Fahrenheit, below normal. Still the spells of gnawing in the stomach increase in intensity and frequency—oftentimes arousing the patient from sleep to experience the torturing pain which nothing short of the most pronounced anodynes will even temporarily relieve. Finally—generally after a meal or after exertion—hæmorrhage from the stomach takes place. This may be either "coffee-ground" emesis, or pure blood mixed with the ingesta and gastric secretions. In some cases mælena takes place—especially if the pylorus be the seat of the erosion. But constipation is the almost invariable condition of the bowels—probably owing to the fact that too little food is retained long enough in the stomach for digestion to take place. In short, the bowels are empty.

When perforation takes place, signs of peritonitis develop, and the patient usually rapidly succumbs to shock and prostration. Syncopal attacks are not infrequent at the moment the peritoneum is opened. But if the perforation occurs through some part where there are broad and strong adhesions, without opening into the peritoneal cavity, signs and symptoms of disease of the organ so invaded soon make themselves apparent, and complicate the case.

Diagnosis.—Taking a case of chronic gastric ulcer in its entirety of symptoms, it can scarcely be mistaken where no confusing complications have co existed. But the opportunity for making this direct diagnosis occurs too late to enable the physician to render that service for which he was hopefully summoned.

The main conditions from which we have to distinguish chronic ulcer of the stomach, are: Hysteria, gastralgia or gastrodynia, rheumatic pains over the stomach, atonic dyspepsia, chronic gastritis, cancer of the stomach, corrosive ulcer of the durdenum, and hepatic colic.

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(1) Singularly to say, cases of the many phased disease, *hysteria*, may, on the first visit or two, so simulate chronic gastric ulcer as to lead to a doubtful diagnosis—especially in young chlorotic females with amenorrhœa and leucorrhœa. The complexions of two females with the different troubles may closely resemble. The indigestion in each is often very similar; and the epigastric tenderness on pressure may occur in both. There may be even vomiting of blood in the hysterical case as in the real disease, etc., but upon close investigation it will be detected that the hæmatemesis in the one case is either vicarious menstruation or is due to other causes than gastric ulceration; the pain is as great upon superficial as upon deep pressure over the epigastrium, and it radiates more widely over the body than do the "referred pains" of ulcer of the stomach. Besides, in the latter disease, there is severe pain posteriorly between the shoulders, corresponding to the sight of lesion in the stomach, which pain is not materially increased upon ordinary pressure, whereas the pains of spinal irritation which so almost constantly attend hysteria are more superficial and have a wider area. During the period marking the chronicity of the hysterical trouble, other evidences of hysteria will be discovered at times when there is absence of symptoms of gastric ulcer. But it must not be lost sight of that young chlorotic hysterical females are the very persons in whom perforating gastric ulcer does most frequently occur. Be careful, therefore, that the diagnosis, whether by the direct or symptomatic process of inquiry, or by the process of exclusion, goes only so far as to distinguish that which is simulated from that which is real. Leube says in cases which are still doubtful he treats the patient by beef broths, etc., as if gastric ulcer were present. If the disease is not considerably benefited by this diet, he excludes ulcer, and gives hydrochloric acid, iron, etc.

(2) *Gastralgia or gastrodynia* is usually sudden in its development, and does not present, in general, the grave symptoms denoting organic lesion of the stomach. There is not that expression of countenance which commonly points to grave gastric or abdominal trouble. Eating often relieves the pain, as does firm pressure over the pit of the stomach;

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nor is the pain so localized as in gastric ulcer. Pyrosis is generally present. Leube says if the pain disappear within a few minutes after the application of a constant current from 20 to 40 cells, he regards the fact indicative of cardialgia; for in gastric ulcer he has not been able to cause cessation of the pain by the constant current.

(3) *Rheumatic pains* in the muscles over the stomach are more marked in the left recti and obliqui abdominis muscles —especially near their attachments to the ribs where moderate pressure cannot affect the stomach. The symptoms are also independent of the digestive process, and occur almost invariably in those who have other evidences of rheumatic diathesis.

(4) *Atonic dyspepsia.*—Dyspepsia, as defined by many, refers to structural changes in the stomach, and is a disease; whereas indigestion is a functional derangement, and is, therefore, only a symptom of disease.

As distinguished from chronic gastric ulcer, atonic dyspepsia is not usually attended by pain or soreness in the epigastrium, but rather by a sensation of weight after eating—a feeling as if there was a load in the stomach rather than decided pain or inflammatory tenderness. Indigestion is more marked than in stomach ulcer. There is no hæmorrhage, no change of complexion, nor is it peculiar to any age of life. Deep pressure does not cause pain, but rather a sensation of heaviness or oppression. There is no febrile action.

(5) *Chronic gastritis* presents signs and symptoms so alike those of the early stage of gastric ulcer that they can scarcely be distinguished, if at all. In chronic gastritis the stomach pain is both constant and augmented by taking food; in gastric ulcer, while pain is never absent upon pressure over the epigastrium, and is more severe after eating, not unfrequently there are periods of comparative intermission after emesis or after the stomach digestion has been completed. The pain is also more distinctly localized than in gastritis. In the latter, there is more acidity of the stomach, and if there is emesis, it is composed of half digested food and mucus. In gastritis in others than drunkards, hæmatemesis does

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not occur, whereas it is usual at one stage or another in gastric ulcer, and is often profuse. There is sometimes a slight earthy tint of the skin in cases of gastritis, whereas a sallow pallor occurs in ulceration. Marked exacerbations and remissions take place in chronic gastritis, regardless of the emptiness or filled condition of the stomach, whereas all the symptoms in ulceration are progressive until repair begins, or until death results. Chronic gastritis is met with mostly in drunkards, gourmands and those who live on coarse food, whereas these habits do not predispose to chronic ulcer—however injurious they may be when the ulcer has developed.

(6) *Cancer of the stomach* has been styled the "first cousin of gastric ulcer." The stomach pain of cancer is paroxysmal, radiates over the body, is lancinating in character, never intermits, and is scarcely perceptibly affected by moderate pressure over the epigastrium or by the ordinary ingestion of bland food; whereas in chronic ulcer the pain occurs more or less in spells, is more limited in area, has a grinding or gnawing character, and is markedly increased by pressure—whether from without or within the body. Indigestion is more decided in cancer, as is also the acid condition of the stomach secretions. Vomiting is frequent, but does not relieve pain, as it does in ulceration. Excessive hæmorrhage is rare in cancer; in fact, it is usually not abundant, and is of a "coffee-ground color." In chronic ulcer there is often profuse hæmorrhage, which is somewhat discolored or blackened by the gastric juices; but if the hæmorrhage be very moderate, then it has the "coffee-ground" appearance so commonly seen in cancerous hæmorrhage from the stomach. The cancerous cachexia is noticeable in the one case, as compared with the sallow complexion in the other. In cancer, a gastric tumor is usually recognized by palpation if the patient is made to swallow a glass or two of water. Percussion is variable, but there is dullness if the cancerous tumor attains a material size. In gastric ulcer there is no tumor, and percussion gives resonance. Cancer is rare under forty years of age, and the duration of the disease is fatal in one or two years. Gastric ulcer is most frequent in younger persons, and may become indolent and last for years. Be-

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sides, it is stated that in cancer of the stomach the glands in the skin of the navel are enlarged.

(7) *Corrosive ulcer of the duodenum*—fortunately a rare disease in this country, and thought by some authors to be due to the action of the highly acid gastric juice, and to furnish the best illustration of the "peptic ulcer"—so exactly resembles gastric ulcer that the two are rarely distinguishable during life. It usually causes dilatation of the stomach, which is a very rare result of gastric ulcer. If adhesions occur with the head of the pancreas—a not unfrequent circumstance in duodenal ulcer—a sensitive tumor is detected in the epigastrium. "Jaundice and other hepatic phenomena" are also more frequent than in gastric ulcer. Perforating ulcer of the duodenum is more apt to remain latent, but to lead even more suddenly to a fatal termination than perforating gastric ulcer.

(8) *Hepatic colic* occurs mostly in the right hypochondrium, rather than in the epigastrium, and the gall-bladder may be felt. With enlargement of the liver, there is jaundice. Pain intermits, and during the intermission digestion is painless. The escape of biliary concretions in the fæces removes all doubt.

TREATMENT.—It will generally be found that the earlier symptoms of the disease have been treated by the patient himself. He has used "stomachics," "anti-dyspeptic drops," and alll sorts of things that have been suggested by some one who "has been affected just as he is." Even the physician has prescribed time and again without effecting a cure. Finally some diagnostic sign or symptom reveals the real nature of the case. Then, for the first time, intelligent treatment is begun.

The indications of treatment are plainly: Rest the stomach; rest the mind and body; relieve the pain and other urgent symptoms; heal the ulcer; attend to the complications.

It would prolong this paper too much to detail the mode of application of the different agents now to be suggested. Hence nothing but the briefest references will be undertaken. Indeed, mention will not be made of some of the many remedies named in the text-books.

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(1) *Rest the stomach* by (a) withholding stomach alimentation and medication as far as possible, and (b) substituting rectal alimentation.

(a) Since Dr. Robert Battey, some years ago, demonstrated the perviousness of the alimentary canal by rectal injections in the human subject, so that enemata may be made to pass through the mouth, the value of rectal alimentation has become recognized—especially as the processes of assimilation and nutrition are effected by portions of the intestinal tract below the stomach. These facts being established, we understand how nutrition may be maintained for an almost indefinite length of time by the proper administration of suitable nourishment by enemata. By this method, I have myself sustained a fair degree of nutrition for a consecutive period of thirty-one days in one case, and over forty days in another case.

(b) Rectal diet should consist of changes of articles of food as required for stomach ingestion. Such articles as milk, peptonized milk and soups that are strained of fibres, beef tea, veal, mutton and poultry broths, arrow-root, tapioca, maize, rice and other starchy soups, strained vegetable soups of different kinds, bland emulsions of cod-liver oil, etc, may be administered. Enemata should not be in such quantities as to greatly distend the bowel; for such overdosing would disturb the stomach whose rest we are seeking to secure. If the case becomes threatening for lack of nourishment, the ordinary procedure of annointing the absorbent surfaces of the body with oils, etc., may be added to the treatment. Of course, if any food be admitted by the mouth, it should be only in small quantity and of such quality as will tax, in the least degree, the function of stomach digestion.

In using rectal alimentation, it is best always to clear the lower bowels especially of any accumulations before giving the rectal food. Then allow a time of, say, a quarter of an hour for the peristaltic action of the intestine to quiet down before administering the rectal diet, which should be injected comparatively slowly so as not to excite the bowel to contractions. After this injection, retain it by a wad of cloth gently pressed upon the anus for a few minutes. When

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necessary to remove the refuse matter by stronger enemata than simple warm water, use castor oil and castile soap-suds, with a small quantity of spirits of turpentine, if required, to stimulate the bowel into action.

(2) *Rest the mind* by limiting, as far as possible, every occasion for mental anxiety or effort. We all know how seriously affected the stomach often becomes from brain worries.

Physical rest should be the more positively insisted on if hæmorrhage has occurred or is threatened. Let the patient have the most comfortable recumbent position he can get, which is generally by lying on the left side. If the symptoms be very severe, let changes of position in bed be effected by the attendants. One of the patents of the many excellent invalid beds now on the market is very useful in these cases. The upright position should be avoided as far as possible. Let nothing preventable press or drag on the stomach. In mild cases, however, as also in those whose convalescence seems positively established, moderate passive general exercise may be indulged in, such as short carriage rides over smooth roads, etc.; but all violence, jolts and jars should be avoided. Exercise of this kind should not be carried to weariness.

(3) (a) *Relieve the pain* by anodynes. If it is known that opium or any of the anodyne alkaloids do not nauseate, some one of these preparations may be used—preferably by hypodermic injections. But if they do disturb the stomach, leave the preparations of opium alone, or else use them in such combinations, if any can be found, that will not nauseate. Belladonna or atropia may be combined with the opiate, or used separately. Henbane, hemlock, potassium bromide, etc., in liquid preparations, may serve as sufficient substitutes. Let all anodynes, however, be discontinued as soon as the symptoms will permit. Chloral-hydrate is an excellent adjuvant whenever any of the class of remedies named are administered by the mouth. Hop poultices over the pit of the stomach are frequently soothing. Minute pledgets of ice sometimes relieve pain if allowed to be swallowed. In one patient of mine, the application of crushed ice in an oil silk bag over the pit of the stomach and reaching upwards

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along the course of the œsophagus gave positive relief. These applications were continued for from five to fifteen minutes at a time—according to the ease experienced by the patient—and renewed as often as necessary.

(b) *Foul gaseous eructations* are frequent in some cases and very annoying. In such a condition, the administration of charcoal is useful, as also magnesia carbonate—either or both in as small quantity as may be sufficient. Lebert says pure bicarbonate of sodium in doses of fifteen to sixty grains is specially valuable in these cases, as it can be taken for quite a length of time. An effervescent powder made with bismuth is also highly recommended. Dilute hydrocyanic acid has its advocates. Chloral hydrate again comes into service. If the gastric acids are too much neutralized by the bicarbonates, tincture of nux vomica, tincture of rhubarb, etc., are to be added.

(c) *Nausea and vomiting* are generally prominent symptoms, demanding relief. The agents just named are often very satisfactory. Ten to twenty drops, three times daily, of a solution of potassium iodide—one drachm dissolved in one ounce of bitter tincture, of the German Parmacopœia—are highly spoken of also by Lebert. Small doses of nitrate of silver, combined with compound extract of gentian, is recommended by Dr. Yeomans, of Canada. Milk, boiled and then skimmed, with lime water is often useful. But whatever agent may be selected let it be used tentatively.

(d) To check the *hæmatemesis*, astringents often have to be used; but the milder the preparation that is necessary is the best one to use. Table salt is better than nothing; alum is good; tannin is surer; opium in some liquid preparation combined with solution of acetate of lead has a more prolonged effect when it acts well. Five-drop doses of solution of sesquichloride of iron—properly diluted—has even been required. Pledgets of ice may be given with advantage with any of the agents just named, and ice poultices over the epigastrium are useful. Four or five grains of aqueous extract of ergot combined with about a grain of opium, and administered about once in every one or two hours is specially recommended as a hæmostatic in such conditions by some English writers.

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(e) *Syncopal attacks* must be treated on general principles. Inhalations of hartshorne, of ether far short of anæsthetic effects, slapping the cheeks and friction to the extremities, etc., are the usual remedies, and act well. The head should be kept low. The surface of the chest and face should be sprinkled over with cold water. Hypodermic injections of ether and alcohol, it is said, have been required in some cases. But it is only necessary to mention that attacks of threatened or complete syncope do sometimes occur in cases of chrouic ulcer of the stomach in order to put the physician on his guard. The appropriate remedies will suggest themselves.

(f) *Constipation* should be relieved preferably by enemata Avoid drastic cathartics by the mouth. The enemata should be as bland as possible to effect the object in view.

(4) The special object of this paper is reached when we come to consider the *fourth* indication of treatment, which is

Heal the Ulcer.—Undoubtedly, in many cases of the disease, the ulceration has been cured by absolute rest of the stomach, as described under the first indication. Hence this is an essential part of the treatment—whatever other means may be resorted to.

So much has been said about the good results of Leube's diet-method that this paper would be incomplete were not a reference made to it. In brief, Leube confines the patient to bed, and applies hot poultices to the abdomen, and quiet is enjoined. During the first few days, a tablespoonful of Carlsbad salt (composed mostly of sulphate of soda, chloride of sodium and carbonate of soda) in a pint of luke-warm water is given in the morning. If this fails to evacuate the bowels, the stomach pump may be cautiously used to wash out the stomach. The diet from the start is to be a pot of beef solution* per diem, corresponding to a half pound of beef. To this, for breakfast and dinner, add some milk and a few pieces of rusk, which should be thoroughly softened and masticated before swallowing. The beef solution is

* Digest meat with a strongly acid solution of pepsin in hermetically sealed vessels at a temperature much higher than that of the human stomach. Under this treatment, the meat is ultimately reduced to a very fine emulsion, and the solution contains a greater or less quantity of peptones.

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taken pure, or it may be stirred in bouillon, with a little of Liebig's extract of meat, and a little salt, added or not, as desired. All food should be lukewarm. After two or three weeks, give a light diet of pigeon, chicken, purée of potatoes, thicker soup, wheat bread, etc.; and after eight days longer, gradually return to coarser food. Since adopting this plan, Leube says he has never found it necessary to resort to any other remedies.

But, in addition to rest of the stomach, and, as we would urge, the substitution of feeding by the rectum, or in combination with Leube's diet-plan as just described, some medicines have a special reputation. Nitrate of silver is mentioned by all the books, but that is growing or has grown practically into disfavor. Bismuth subnitrate is a more recently adopted agent, and has the advantage that if it does no good it does no perceptible injury. Muriated tincture of iron has its advocates, but we would fear its acid irritative action upon the coats of the stomach. Many other remedies have been praised; but from knowledge of their mode of action and with our theory of the nature of the disease, we are driven to the conclusion that the patient has sometimes recovered in spite of the medicines administered.

Recently iodoform has been prominently called to the front; and no doubt it is of value—given as a powder in two- or three-grain doses three times a day. Soluble capsules, if the powder cannot be conveniently taken, are preferable to pills that have been long made. Iodoform, however, in some cases, has the misfortune of being a nauseant, and its odor makes it always objectionable.

Without referring to other numerous preparations named in the books, all of which are used upon general principles, my special object is to call attention to the value of *chloral hydrate, in solution, as a curative agent.* Reference has already been made to its use as an adjuvant anodyne, and also as a stomachic. But now we wish to give it a more exalted rank—that of a remedy for chronic ulcer of the stomach. In effect, this ulcer is of the indolent variety, and the use of chloral in such ulcers, when they occur on the outer surfaces of the body was made popular by the recorded results of

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Lucas, of Guys Hospital, in 1875. Dr. Hunter McGuire, of this city, has given this agent much prominence in the treatment of various indolent conditions of wounds and other surgical cases. Chancroids, which have something of the appearance of gastric ulcers, have been successfully treated by chloral. But I am unable to find that it was ever used for chronic ulcer of the stomach before I so used it in 1881. In a desperate case of chronic ulcer of the stomach under my treatment in January, 1881, I determined on the use of chloral hydrate in ten-grain doses, repeated at intervals of from two to four hours to secure sleep and ease. Much to my surprise, all the symptoms of distress were greatly relieved. A continued study of its action taught me that smaller doses acted just as well, and of course the danger of chloralism was less. I was encouraged to pursue this treatment by a consultation with Dr. Hunter McGuire, who related at the time some of his valuable experiences with the agent in other diseases or conditions. I would recommend a solution in water of from three to six grains of chloral to one ounce of distilled water. The dose should be a teaspoonful every few minutes until half a fluid ounce of this solution is taken. This same treatment acted most satisfactorily in another case of the disease under my care, which occurred shortly afterwards in the person of a sailor about forty years of age. The first of the two cases referred to was a lady about thirty-five years of age.

5. In regard to the *complications of gastric ulcer*, treat them on general principles. If perforation into the belly is anticipated, prepare the patient for the result as you would do a patient about to undergo surgical shock. Administer quinia in mucilage by enemata. Some army surgeons have suggested that quinine be given to soldiers before going into battle, under the supposition that, if wounded—especially in the belly—it will lessen the shock, or else render the system better able to withstand it. On the same principle, it might be advisable to use quinine constantly in gastric ulcer, knowing that perforation is the great danger.

General peritonitis sometimes sets in as an extension of the local peritonitis that was intended to serve as the medium

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of protective adhesion between some abdominal viscera and the point opposite the ulcer in the stomach. But whatever be the cause of the general peritonitis in such cases, little else is to be done than to "splint the bowels" with opium in commanding doses.

Fistulous tracts that open externally are to be left alone until the gastric perforation has been healed. But if satisfied that the adhesions around the perforation are sufficient in breadth and strength not to allow of an opening into the belly, after all other effects of gastric ulceration have passed away, then efforts at closing the opening at its original base may be cautiously attempted with such cauteries as nitrate of silver in its pure state.

It is very important just here to determine whether or not the peritonitis be due to perforation of the stomach. Of course, if the belly is opened by the ulceration, some of the gaseous and other contents of the stomach pass into the peritoneal cavity. Dr. Flint, Sr., has demonstrated that in ordinary peritonitis, without perforation of the intestine or stomach, hepatic dullness on percussion remains unaffected. But if perforated, the gas of the stomach or intestines separates the liver from the anterior wall of the abdomen. So that, the patient lying on her back, if there be gas in the peritoneal cavity, will furnish a resonant percussion over the site of the liver. This is a valuable piece of information.

Perforation into the peritoneal cavity having been diagnosed, what are we then to do? Hope, of course, is very slender. The surgeon may have to be called on. If the accumulation of gas in the peritoneum too painfully distends the belly, aspiration over the liver may prove useful. Besides the withdrawal of gas, some of the effused liquid or the fluids that have escaped through the gastric aperture may thus be removed. In introducing the trocar, be careful not to penetrate the liver—not that the small puncture would do harm, but because the peritoneal gas will not escape through the canula. Bowditch's aspirator or the usual mode of adaptation of Davidson's syringe to the purposes of aspiration may be used. Dieulafoy's aspirator is too complicated to be in general service. That devised and manufactured by

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Messrs. Codman & Shurtleff, of Boston, is simple in construction and easy of management.

In addition to aspiration as just briefly mentioned, if the vital powers are not too much wasted, a counter opening may be made in the most dependent portion of the abdomen, and the train of symptoms treated upon the general principles of drainage of the abdomen, laid down in a paper read before the Medical Society of Virginia by Dr. Hunter McGuire in 1873 in cases of penetrating gunshot wounds of the peritoneum. The administration of turpentine for the healing of the perforation in the stomach might be resorted to on the same principle that induced Dr. Geo. B. Wood, years ago, to recommend it for intestinal perforations in cases of typhoid fever.

Clinical Reports.

Horny Excrescence on the Temple. By W. THORNTON PARKER, M. D., (Munich) Morristown, N. J.

The following interesting account is from the note-book of the late W. Thornton Parker, M. D. of Boston. It is a translation of an article published in the "Diario" of Mexico, June 6th, 1816. I believe the case has never been reported in any American medical journal, and it is offered as an anatomical curiosity. Our surgical text-books offer very limited information on this subject, and it occurred to me that this carefully reported case might interest the readers of the *Virginia Medical Monthly.*

Paul Rodriguez Sandoval, a Mexican, middle age, fleshy, robust, above six feet high, sanguine, phlegmatic temperament, temperate and moral. In a quarrel with some of his companions he was struck several times with a stick upon the head. Some time after a small tumor appeared near the angle of the lower jaw-bone, beneath the left ear, and a similar one afterwards formed on the right temple. Some years after he engaged himself to a muleteer as an Atacador. The tumors gradually increased in size, but were attended with little or no pain.

About this time Don Domingo Lardizabel attempted to remove the tumors by cauterizing liquids. The tumor on the jaw-bone was reduced, leaving only a scarfy cicatrix,

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which increased in size whenever the hair was permitted to grow near it. The one on the forehead was considerably diminished, but any pressure caused it to enlarge. He also used daily ablutions of soap and hot water. He continued in this state about eighteen years. Six years since his wife died, and he neglected the daily ablution. During this period the tumor enlarged four times, but was again reduced by the care of Don Domingo. Since the Don's death he has used no medicine whatever. The patient has been employed as a packer in the house of Sig. Don Jose Cortina for some years, and during the four last the tumor has gradually acquired the form, size, and horny appearance now to be described.

At present it closely resembles the horn of a sheep. The 22nd of the present month, a tierce of sugar which he was moving fell upon the excresence, breaking it, and separating the one part from the other. The part which remained fastened by the integuments was torn off in a paroxysm of pain by the patient himself, leaving an ulcerated sore. In this state he was admitted to the Royal Hospital of St. Andrew, City of Mexico, 28th of March, 1816.

The horn is situated upon the whole body of the temporal bone above the ear, and extends above and behind upon the inferior lateral portion of the parietal. The base is that of a cone whose circumference is fifteen inches one line. About two inches from the base it is divided into two branches—the first five inches and nine lines in length—the diameter at its separation being about two inches. It descends obliquely, forming an acute angle with the facial line, and is slightly curved and pointed. The other is subdivided into two portions. The first measures three inches in diameter at the base, and twelve inches seven lines in length measuring the curve of the convex side. From the temporal bone it curves downwards to the first molar tooth; it then recurves upwards to the union of the upper and lower jaw. The distance from the recurved point to the main body of the *horn* is two and a half inches. Nine days after its separation the horn weighed eight ounces.*

The other portion is flattened, covering the superior portion of the outer side of the orbit of the eye, and descends obliquely towards the nose; it is about two inches long and one-half inch wide.

* Its internal appearance is a spongy, dirty-white substance. The external is compact, with something like a silky gloss, with broad and deep longitudinal rays or lines, in some portions forming rucks; when cut in thin slices it was as transparent as common horn.

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Analysis by Don Caters, Professor of Chemistry, Royal Mines: Half an ounce of the glossy substance heated in a covered crucible, exhaled a dense smoke identical in odor to that from an equal weight of ram's horn. The carbon in both crucibles presented the same color and lustre. Supposing the half ounce divided into 400 parts, the human horn diminished 378, the ram's 300. The former had a saltish taste, the latter not. The salt residuum exposed uncovered to a quick fire, lost the greater portion of its substance without being converted into ashes. Washed in distilled water it gave a small quantity of muriate of soda; the remaining carbon, tested with dilute nitric acid at the boiling point, gave a little phosphate of lime. By the addition of a few drops of sulphuric acid a small quantity of sulphate of lime was formed, leaving the phosphate combined with the nitric acid. This, in which the whole of the carbon was dissolved with caustic potash, gave no precipitate. About a drachm taken from the point of the horn and boiled in water became white and soft and ultimately dissolved. Potash being added, and the solution filtered, in a short time it became like jelly.

The patient died in hospital, June 4th, 1816, and his skull and portions of the bone are preserved in the museum of St. Andrews. The skull has no portion of the horn attached, but the place where the two larger ones were is distinctly visible.

The squamous portion of the temporal bone and part of the right parietal, are particularly thick and solid, and a portion surrounded by a rough and unequal ridge of a spongy looking, scaly bone, indicated the location of the base of the horns.

Original Translations.

From the French and German. By WM. C. DABNEY, M. D., Charlottesville, Va.

Trichinosis and the Prohibition of American Pork.—A recent number of *Le Progrès Mèdical* (January 5th, 1884,) contains an editorial of more than ordinary interest on the subject of "trichinosis and the prohibition of American pork." The subject is one of so much importance, not only from a medical, but from a commercial point of view that an abstract of this paper would seem to be desirable.

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The author calls attention, in the first place, to the fact that while trichinosis is comparatively common in Germany, it is very rare in France. It has been claimed, he says, that hogs raised in France are but little infested with trichinæ while those of America and Germany are filled with these parasites. Those who now advance this hypothesis, however, cannot bring forward any proof, based on comparative investigations on different specimens of pork, nor do they furnish any evidence founded on statistical inquiries. On the contrary, the investigations of Vallin and more recently of MM. Brouardel and Grancher who studied the recent epidemic in Emersleben are diametrically opposed to the hypothesis just mentioned.

The history of the Emersleben epidemic is, in brief, as follows: An "Anglo-German" hog, born in Saxony was killed on the 11th of September, and its flesh submitted to two of the 18,000!! inspectors employed by the German Government to examine for trichinæ. These inspectors found no parasites in the meat, and as an evidence of their good faith if not of their ability as microscopists, they did not hesitate to eat some of the meat themselves. The rest was cut up and sold to the inhabitants of the village and surrounding country. Investigations undertaken by the Burgomaster brought out the fact that this meat was in the market for the space of eight days, and that it was sold chiefly in the form of sausage. It was furthermore found that much of it had been eaten *raw*.

The two inspectors and many of those who ate this raw sausage were taken sick, the number affected diminishing in direct proportion to the time which elapsed after the hog was killed before they ate the sausage.

Among those eating it on the second day after the animal was killed the mortality was 33 per cent.; it fell to 10 per cent. among those eating it on the fifth day and to 0 among those eating it on the seventh and eighth days. This seems to show that the trichinæ die or become harmless quite soon after the hog is killed, even if the meat is not cured in any way.

All the patients in the Emersleben epidemic, without exception, had eaten the meat *raw*. About 250 persons ate it cooked, and not one of these suffered with the disease or felt the slightest indisposition.

It would appear further that even a moderate degree of heat is sufficient to destroy the parasites. In a large family who ate the sausage after it was placed in boiling water for a few moments only, there was not a single case, but the cook

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for this family ate a little of the meat raw and was affected with trichinosis.

The danger the writer concludes is not in the pork itself, but in the manner in which it is prepared. The ingestion of a large quantity of alcohol along with the meat would seem to destroy the trichinæ; at least this was the effect in one instance.

The author next quotes from Kenze to show the symptoms of trichinosis. These are sufficiently well described in the text books and make any mention of them here unnecessary; but it may be as well to mention that MM. Bronardel and Grancher distinguish the stages of the affection. The first or gastro-intestinal stage is caused by the liberation of the parasites from the muscular tissue of the animal after it is taken into the stomach; this is frequently called the choleriform stage. The second stage, called the typhoid, is characterized by elevation of temperature, stupor, and muscular pains which make up a picture much like that of typhoid fever. The third or cachectic stage is marked by very great anasarca, suggestive of albuminuria, though albumen has not been found in the urine. This succession of symptoms in a disease lasting two or three months makes the diagnosis easy and certain to M. Bronardel.

Virchow is quoted by the author as saying that there is not one single well authenticated case of trichinosis in the human subject (in Germany) which could be traced to the use of pork salted in America.

In spite of the facts which have been mentioned and the strong statement of Virchow, M. Paul Bert, the noted physiologist, has exerted his influence in the Chamber of Deputies to prohibit the importation into France of American pork. He is quoted in the *Journal Officiel* of December 23rd, 1883, as saying: "The epidemic of trichinosis is altogether different from epidemics of ordinary diseases; * * * * it is something comparable to the amount in France of the phylloxera." He goes on to say in reply to the statement that to prohibit the introduction of American pork would be a serious matter for the poor. "That it would not do to give to the laborer a poisonous meat under the pretext of protecting him." The deputies were naturally led to the M. Bert's view of the matter and decided by a vote of 272 to 153 to exclude American pork.

On the other hand the Academie de Mèdicine after careful consideration of the matter passed a resolution which was voted for by 69 of 72 members present declaring their con-

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viction that there was no danger whatever in meat which was properly cooked and that any law prohibiting the introduction of pork would be injudicious.

In the same number of *Le Progrès Mèdical* is published the decree of the President of the French Republic, dated December 24th, 1883, in which the importation of American pork is prohibited entirely after January 20th, 1884; prior to that time, merchants would be allowed to import "fully cured" meat at the ports of Havre, Bordeaux and Marseilles, provided it was found to be in satisfactory condition by inspectors appointed for the purpose of examining it.

In a discussion on the subject of trichinosis at the Academie de Mèdicine on January 8th, 1884, M. Bronardel said that so far as he could learn there had never been but one case of trichinosis in France (at Crépy-en-Valois), and in this instance the disease was produced by a French hog. Either prolonged salting, or thorough cooking of the meat seemed to prevent the disease entirely in France.

M. Chatin said he did not think it had been determined at what temperature the trichinosis was destroyed and he supported the Ministry in their action with reference to American pork.

[Gerlach says trichinæ are killed by a temperature of 133° Fahr.; Fielder says the temperature should be 155° Fahr. to destroy them.]

Estlander's Operation for Empyema.—At the meeting of the Société de Chirurgie on January 2nd, 1884, M. Lucas Championniére reported a case of empyema in which, with the assistance and counsel of M. Bouilly he had resected several of the ribs for a part of their length. The patient in this case had had a fistulous opening into the pluera for two years; this fistulous passage penetrated a considerable distance and communicated with a cavity holding about five hundred grammes of liquid; the patient's general condition was bad. The 9th, 8th, 7th, 6th and 5th ribs were resected in part; eleven centimetres of the 9th were removed and the length of each of the three others which was cut away diminished till the 5th was reached, from which only 8 centimetres were cut. At the time the case was reported there had been a considerable diminution in the quantity of pus discharged, and the patient's general condition had improved very much.

M. Lucas Championnière stated that the operation had never caused any serious accidents, but that while it had certain prompt advantages, it had certain disadvantages con-

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nected with it also. [The operation is of course based on the assumption that the sides of the suppurating cavity cannot fall together on account of the bony walls of the chest holding them apart. As a matter of fact this does not seem to be a very common trouble in cases of empyema; provided there is *thorough* drainage of the suppurating cavity, the vast majority of cases will do well. In addition to this the resection of the ribs, in children especially, as has been pointed out by more than one writer on empyema will often produce a curvature of the body and will prevent the gradual expansion of the lung which *might* take place otherwise. More often however the regeneration of bone is so rapid that it prevents the walls of the cavity from collapsing. It may sometimes be necessary to remove a part of one rib in order to insert a drainage tube where the chest has sunk and the ribs have overlapped each other, but in two very severe cases of this sort of more than a year's duration I found it unnecessary to remove any bone whatever, and the result in each case was all that could be desired.—W. C. D.]

M. Verneuil in the discussion which followed the reading of Lucas Championnière's paper, said that he thought too much stress was laid on the impossibility of the walls of the suppurating cavity collapsing. As a general thing, he thought the suppuration was kept up by other circumstances, and it was only in very exceptional cases that he should think Estlander's operation would be advisable or even justifiable.

M. Monod, after calling attention to the fact that this method of treatment had been suggested and practised by Letiévant, of Nantes, before Estlander proposed it—went on to say that he had once performed the operation, "with immediate good results." The pleural cavity at first appeared to contract rapidly, but after three months "all was not ended, and the quantity of pus furnished by the fistulæ was still considerable." He attributed this want of success to the rapid regeneration of bone; at the end of three weeks bony arches had already been thrown out and had become quite resistant. This might have been avoided perhaps had the periosteum been resected also.

M. Despres said he thought the treatment was applicable to very few cases; in the case of fistulæ which extended into the pulmorary tissue, of course it was inapplicable. When the pleural cavity alone was involved many cases got well of themselves, and in others, simple drainage was sufficient; in many cases too, the fistulæ were tolerated for years and gave no trouble.

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[The danger of allowing an empyema to continue whether it has opened externally, or not, is so great that it should always be radically treated. Unless this is done the continued suppuration may set up degeneration in the liver and kidneys, may lead to phthisis, or produce other grave and often fatal sequelæ. I have endeavored to show what these dangers are in a paper published in the *American Journal of Medical Sciences* for December, 1882.—W. C. D.]

Embolism and Paralysis from Irrigation of the Pleural Cavity.—By Dr. Escherich (*Münich Aerztl. Intelligenzblatt*, No. 40, 1883). Inasmuch as in the preceding article some of the advantages of the radical method of treating empyema have been considered, it will be well to bear in mind at the same time some of the dangers incident to the use of injections into the pleural cavity. The present paper is by one of the assistants at Prof. Gerhardt's clinic in Munich.

Since Kussmaul, Fraentzel, König and others opened the way for the operative treatment of pleural exudations this method has become very popular in Germany and certain complications not previously seen in cases of pleuritic effusion have presented themselves. It is true that the dangers incident to prolonged pressure of the fluid and its retention in the cavity have been in great measure obviated; but it cannot be denied that, in their stead, others have arisen which while they are far less common are perhaps even more dreaded by surgeons from the suddenness of their occurrence and the alarming symptoms by which they are attended.

Escherich draws attention in the present paper to the occurrence of embolism and some nervous symptoms for which as yet no anatomical ground-work has been found.

While acknowledging the great benefit which has been obtained by operative treatment in cases of empyema, he draws attention to the fact that injections into the cavity of the pleura produce an amount of mechanical disturbance which must of necessity, he thinks, be attended with considerable danger. French and English medical literature, he says, is rich in reports of alarming symptoms which have arisen under these circumstances. In Germany the only cases of death which have been reported have been attended by symptoms of apoplexy or rather of apoplectiform attacks. He reports a case of empyema treated by injections, etc., in which several of the little arteries in the brain became plugged by emboli, causing a number of small abscesses. In January, 1875, a man, thirty-seven years old, had an attack of pneumonia, which was followed by empyema on the

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left side. The patient was brought to the Hospital on June 22d, 1875, in a very prostrate condition, and the next day a free incision was made into the pleural cavity in the fifth intercostal space. The cavity was washed out daily with an antiseptic solution. On the third of August, there being great improvement in the patient's condition, he left the Hospital with a thoracic fistula. On the 25th of October he returned, and it was found that the opening had partially closed, and his condition was much worse; so that a new opening was found necessary. This was made, and, under systematic washing, he improved rapidly.

On the 23d of December, however, the patient was taken on the street with an apoplectiform attack. The pupils were contracted, pulse very slow and the headache exceedingly severe; there was also moderate remittent fever. He died on the 28th of December. At the autopsy made by Dr. Ziegler the membranes of the brain were found to be healthy, but there were a number of small abscesses in different parts of the brain itself.

A case somewhat similar to this has been reported by Leichtenstern. The syringing washes loose little masses of coagulated matter which are carried into the circulation and finally lodge in the small arteries of the brain and other organs.

Dusch has reported cases also (in which the diagnosis was confirmed by autopsy) where the pulmonary arteries became plugged during the irrigation.

In many cases, however, the autopsy shows no material lesion to account for death or for the symptoms during life. These symptoms are referable to the nervous system, and the cases may be arranged in three categories: (1) In the first, there is sudden prostration (ohnmacht), accompanied by general or partial convulsions, which has been called by the French pleuritic epilepsy. (2) In the second class of cases convulsions are observed, and these are followed by paralysis, or sometimes by spasm, of the muscles of the affected limbs. (3) In the third class paralysis of an upper or lower limb, or of both, comes on gradually a longer or shorter time after the irrigation. Sometimes vaso-motor or trophic disturbances are observed. This has been called pleuritic hemiplegia.

In the first and second classes of cases, when the attacks come on suddenly, it is of course possible, says the author, that the cause may be found in an embolus. In the third class of cases, he, along with Lepine, who has studied the

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subject carefully, thinks the symptoms are entirely different from those of embolism—the great difference being that in cases of embolism the paralysis comes on suddenly, while these cases of pleuritic hemiplegia are *gradual* in their onset. He reports two cases observed in Gerhardt's clinic, but says candidly that their pathology is as yet a complete mystery.

Analyses, Selections, etc.

Valentine's Meat Juice after Labor.—George H. Elliott, M. R. C. S., E., in the *British Medical Journal*, of December 15, 1883, under the head of "Obstetric Memoranda," reports "A Case of Spina Bifida Causing Retarded Labor," as follows:

"Mrs. G., aged 45 years, has had eleven children—ten born alive and two miscarriages. She was twenty-one years of age when the first child was born. My assistant, Mr. Dennis M. O'Callighan, was called at six o'clock in the evening, and, on arrival, found the patient in strong labor; pains regular. On taking a pain, he found a breech-presentation, with the child's back to the pubes. After waiting some hours, he found, on passing his finger up the spine of the child, a soft tumor with opening (the tumor being burst). He could not feel the feet, the legs being straight up the stomach of the child. After waiting some hours, I was sent for, and found the woman in great pain and labor progressing slowly. On making an examination, I was able to hook my finger into the groove, and then, with the aid of a blunt hook and prolonged traction, the woman, after some trouble, was delivered—the legs being straight up and the arm over the head. After the delivery, we found a spina bifida; and also the child had a very large head. The woman was much exhausted, but revived wonderfully on being given one teaspoonful of Valentine's Beef Juice with one teaspoonful of brandy in a wine-glass of cold water. Ten minutes afterwards we repeated the dose of beef juice, and left her very comfortable. In about an hour the woman recovered without a bad symptom.

I think the above case worthy of record, both on account of the rarity of its occurrence and the difficulty of diagnosis, and also as an illustration of the efficacy of a fluid preparation like Valentine's Beef Juice. I would advise every country practitioner to always take in obstetric cases a bottle of Valentine's Beef Juice."

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Mr. Elliott enjoys the reputation of being a careful observer. Hence the value of his recommendation about "Valentine's Meat-Juice" in the above extract. As confirmatory of the suggestion, we may mention that Dr. M. D. Jeffries, of Culpeper, Va., in the August No., 1878, of the *Virginia Medical Monthly* also reports having used "Valentine's Meat Juice" with like good results in a case of spina bifida that came under his care. This "Meat-Juice" is the most perfect of raw beef preparations, and is becoming more and more generally recognized as such the world over.

Vaginitis and Vulvitis.—In a clinical lecture delivered at the Long Island College Hospital (*Medical News* of January 12, 1884), Dr. Alexander J. C. Skene, of Brooklyn, N. Y., made some valuable remarks on these topics.

The first case is one of *vaginitis*. This patient complains of a discharge from the genitals, leucorrhœal in charater. We find also find a prolapsus of the anterior vaginal wall. When she presented herself at the clinic a few weeks ago, she gave a history of acute vaginitis; she then had the profuse purulent discharge so characteristic of this disease. The fact that this was developed abruptly has its significance. It is not easy to differentiate between an ordinary vaginitis caused by uterine disease, and specific vaginitis which is of gonorrhœal origin. The most important point in the history that I know of, is in the difference of the onset of the attack. In the benign or non-specific variety, it comes slowly, the patient usually having the history of some preëxisting uterine disease, and then by degrees the vaginitis is developed, slight at first, and gradually growing worse; whereas the specific vaginitis is developed promptly, and is more likely to begin at the introitus and extend upward; that which is consequent on uterine disease descends downward, and rarely involves the urethra and meatus. These points are important, as it is impossible to differentiate by the mere physical signs. I have seen, especially among insane people, a vaginitis which I knew was not gonorrhœal, as there was no means by which the disease could be contracted, and yet it was extremely difficult to be sure that it was non-specific, and due only to some uterine disease or to the filthy habits of the patient herself. In these large asylums, it being almost impossible to keep the patients clean, so that a vaginitis once started is likely to become severe, I have seen vaginitis so marked that I could not distinguish its character by the physical appearances, and I was enabled to make the

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diagnosis only because I knew the patient could not have been exposed to the specific cause.

When a vaginitis begins abruptly; when it involves introitus, meatus, and urethra; and when it does not extend the entire length of the vagina, you may take it for granted that it is specific.

As regards the treatment of this disease, the great object is to keep the parts clean. The longer this purulent formation is allowed to remain in contact with the tissues the more it irritates and aggravates the disease. We could cure a vaginitis in a few days if we could keep the vagina perfectly clean.

In some neglected cases I adopt this plan, viz., separate the inflamed vaginal walls, and keep them apart by marine lint, so that the moment the purulent discharge is thrown out it is absorbed; it is simply a method of treatment according to the rules of antiseptic surgery, disinfecting the parts as the discharge forms. The douche, however, is very effectual. It prevents the accumulation of the discharge; if you allow the patient to lie on her back with the hips elevated, and then use the fountain syringe for half an hour four or five times a day, you will succeed in your treatment very well. It is not so much the preparation which you use, as the thoroughness of its application, and the care and frequency with which you use it. Keep the surfaces of the mucous membranes perfectly clean; that is the great object.

I saw the other day, in one of the English journals, a mode of treating gonorrhœa in the male by just this method; using the return-current urethral douche, and then introducing a medicated bougie to keep the surfaces apart. The record of the length of time required to effect a cure in these cases was from three to ten days; and those who have had the treatment of such cases know that this record is most extraordinary. I saw at once that the surgeon secured his good results from this method of perfect cleanliness, and it confirmed my experience that this vaginitis can be cured in the same way.

Another point in the disease is that it is very liable to remain latent in some fold of the mucous membrane; generally behind the cervix the disease will lodge and linger. I learned a very important lesson when I first commenced the practice of gynecology. I had a case of vaginitis which I cured repeatedly, but she did not remain cured, and finally I sent her to the late Dr. J. Marion Sims; he wrote me a

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very kind letter, and told me that I had overlooked a little pocket where this disease lingered, and that from this point the disease again started. He told me to expose the parts with his speculum, and I would find this little pocket behind the cervix in the fold of the mucous membrane, and which I had failed to cleanse with my douche. I then carefully examined the patient, and found it as he had described; then carefully cleansing the parts I had no difficulty in effecting a permanent cure.

This trouble, when it involves the urethra, is liable to creep up into the two urethral glands which lie just within the meatus, and remain there; so that you may cure the vaginitis, and it will then start afresh from this source. After I had called attention to the anatomy and pathology of these glands, as secreting the gonorrhœal discharge, a physician in Illinois published two cases, those of husband wife, which he had cured repeatedly of gonorrhœa, but the disease constantly returned. He then discovered the gonorrhœal inflammation of these glands; apparently to all external appearances the parts were looking well, but by pressure upon the urethra of the woman he could cause a little drop of matter to escape. He then laid the ducts open and was enabled to cure the disease.

If you will remember these two points, you will have no difficulty in treating vaginitis, and your patient will not return in a few days and inform you that your treatment has not effected a permanent cure.

Case II is a little girl, whom I understand is suffering from *vulvitis* or vaginitis. This occurs in children suffering from struma or ascarides, and sometimes in those who are tolerably healthy, who, running around until they become excessively warm, sit down upon a cold stone and take cold, getting up a little catarrhal inflammation of the vulva. Here we have the physical signs of the ordinary catarrhal or purulent vulvitis which occurs in children. The outer parts of the vulva are covered with dried pus, while further in are little masses of muco-purulent material. Vulvitis is exceedingly annoying, and not uncommon. It is also very difficult to cure, unless you have great patience—especially if complicated with vaginitis. Now I presume, from my present examination, that there is only vulvitis; because she has the characteristic discharge of vulvitis alone, that is, a muco-purulent discharge somewhat tenacious—you observe how it hangs together. When vaginitis is present with the vulvitis, we get a milky discharge, very abundant. I have seen

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a little girl of this size who would saturate her garments with the discharge so that when they were dried they would be as stiff as if they had been starched. From the absence of this profuse milky discharge I am inclined to think that we have vulvitis alone, and no vaginitis. In vaginitis, even though the vaginal discharge be purulent, it remains fluid, not tenacious like that which comes from the vulva.

This child is also suffering from otorrhœa; and, more than that, she has a sister who suffers from this vulvitis; so I have no doubt in my mind, from the fact that both of them have it, that it is due to a scrofulous diathesis; for in that peculiar constitutional condition we are prone to have inflammations of the mucous membranes.

In the management of vulvitis and vaginitis, keep the parts clean. This, however, is no easy matter when treating the poorer classes. The longer you permit this discharge to remain, so much the more will this inflammation be kept up. This little one should be bathed every two or three hours during the day; carefully wash the parts with a little borax and water, and then apply some dry powder. The one that I prefer is bismuth mixed with little chalk; have it finely powdered and dust it on. Iodoform also answers the same purpose, but the odor is not very pleasant. These applications have a soothing and quieting effect upon the mucous membranes, and keep the surfaces apart. This is a very important item in treatment, because two inflamed parts lying in apposition cause an internal irritation. In vulvitis this is about all you will have to do locally. Also attend to the general health by giving good diet, cod-liver, oil, iron, and so forth.

But if you have vaginitis, use the vaginal douche, carrying it up carefully to the end of the vagina, and carefully wash the part with a solution of borax and water, afterwards wash it with a mild solution of zinc or hydrastis canadensis. These cases are extremely difficult to cure, because the mucous membrane of the vagina is full of deep rugosities, and the wash does not come in contract with all parts. You therefore require to distend the vagina as much as possible while using the local applications, but even then there may be little places where some of the discharge will remain, and by and by it will beget the old trouble anew. Some authors say that if you have tried all these means and failed, it is better to place the patient under an anæsthetic, and then distending the vagnina, touch every part of the mucous membrane with a solution of nitrate of silver, and follow it up with a douche.

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Treatment of Threatened Mammary Abscess.—In the course of an article on elastic pressure in the *Medical and Surgical Reporter*, January 26, 1884, Dr. J. S. Manning, of Manchester, Ky., advises the following practical method of treating inflamed mammary glands. He says:

Elastic pressure has an application in an important class of cases not yet generally adopted by the profession, namely, in inflammations of the mammary gland. The text-books teach in threatened abscess of the mammary gland that strapping with narrow strips of adhesive plaster is the proper thing to do. If this strapping has ever been accomplished to the satisfaction of the operator, it has been outside the experience and observation of the present writer. Orthodox treatment has been painful, protracted, and inefficient, and this whole business is a standing reproach to the profession. The treatment of these cases of threatened mammary abscess by means of elastic pressure may be conducted quickly, safely, pleasantly. Take a piece of rubber dam, known among dentists as coffer-dam, about eight inches square, perforate the centre with a hole large enough to admit the nipple of the affected breast. Tie four tapes, one to each of the four corners of the rubber dam. Pass the nipple through the perforation, and carry the tapes around the body and over the shoulders in such manner as will press the gland equably and firmly against the ribs. This pressure, in the first place, supports the breast as in a sling, and removes the pain due to a sense of weight and dragging. In the second place, superfluous blood is driven back into the circulation, thereby relieving the congestion. In the third place, the lacteal secretion is forced along its natural channels, to be discharged at the natural outlet, either spontaneously or by a little coaxing with the breast-pump. This appliance in no way interferes with the use of belladonna ointment or other embrocations, and, of course, constitutional treatment would meet the indications as they arise. This same appliance to a secreting, but not inflamed gland, would cause the lacteal secretion to disappear in a few days. If the inflammation has gone on to suppuration, after evacuating the pus, the application of elasic pressure will greatly relieve suffering and hasten convalescence.

In considering the extreme frequency of inflammations of the mammary gland, the protracted suffering to which every victim of mammary abscess is subjected, the inefficiency of all treatment heretofore recommended, any plan that would control the suffering, and restore this important gland to its

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functions, must be hailed with delight by every lover of his race. Certain it is, if proper care and watchfulness be exercised with the means mentioned above, no case of incipient inflammation of the mammary gland need go on to suppuration; and if suppuration have already taken place, weeks of suffering may be saved by the judicious use of elastic pressure.

The Modern Operation for the Radical Cure of Hernia.—The following editorial in the *Medical News*, February 9th, 1884, will, we believe, be of interest to our readers:

Professor Czerny, of Heidelberg, in 1879, published an account of his method of effecting a so-called radical cure of hernia, which consists of exposure of the sac by a free incision under antiseptic precautions, of reducing the protruded parts, of isolating the sac from the surrounding structures, including its neck in a catgut ligature, and cutting away the remainder, of returning the stump into the abdomen, and, finally, of uniting the refreshened edges of the ring with the continued catgut suture. This procedure includes two distinct operations. Uniting the edges of the ring with silver sutures was first done by the elder Gross, as we learn from his *System of Surgery*, 5th ed., p. 579, in a case of large scrotal hernia at the Philadelphia Hospital, in 1861, with a successful issue. The other step, namely, ligation of the neck of the sac and extirpation of its fundus, originated, in 1876, with Riesel, who described it in the *Deutsche medicinische Wochenschrift*, Nos. 38 and 39, 1877.

Ligature of the neck of the sac, with excision of the fundus and stitching together the margins of the abdominal opening, appears to be freely and successfully practised by the surgeons of Liverpool. In the debate which followed the reading of a paper upon this subject at the Medical Institution of that city, by Dr. Hamilton, which may be found in the *Medical Times and Gazette*, for December 29, 1883, and the *Lancet*, for January 5, 1884, the fact was elicited that it had been done by Mr. Banks between fifty and sixty times, by Dr. Alexander thirty times, by Mr. Parker twenty-eight times, and by the surgeons of the Northern Hospital fourteen times, and, strange to say, without a single death. As a rule, catgut was employed for the neck of the sac, and silver wire for the pillars of the ring.

This operation is applicable to all kinds of hernia, reducible and irreducible. According to Mr. Banks, it should not be performed in young children, unless the opening is very

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wide, or the child is unable or dislikes to wear a truss. In adults, it is especially useful when there is adherent omentum in the sac, and in hernia complicated with undescended testicle, conditions in which a truss is ineffectual. In cases of this description, the omentum or testicle should be removed. In ordinary examples of reducible hernia, it is contra-indicated, unless life is rendered miserable by the disease, or the subject is rendered unfitted for work. The patient should remain in bed for at least three weeks after the operation, and wear a light truss afterwards for additional security; but in none of Mr. Parker's cases was a truss applied, and some of the subjects were up within a week, as he does not think that recurrence of the hernia is referable to the absence of such precautions.

The modern operation for rupture is one of expedieney, not one of necessity. It may be resorted to directly for curative purposes, or as a part of the operation for strangulated hernia. Hence, in estimating its merits as to safety, the former class of cases can alone be taken into account, as it in nowise increases the dangers of the latter class; while both groups should be considered in arriving at a conclusion in regard to its curative effects.

The mortality of the Liverpool cases, which number about one hundred and twenty-five, was absolutely nothing, a fact which reflects great credit upon the surgeons of that city. Unfortunately, little is said of recurrence of the trouble. Of twelve cases in the Northern Hospital which had been observed for at least six months, ten were cured and two failed. The results of twenty-one operations in the hands of Mr. Banks, in which a sufficient time had elapsed to apply the test, and recorded in the *British Medical Journal*, for November 18, 1882, indicate fifteen complete cures, four partial successes, and two failures. Hence, 24.2 per cent. of these thirty-three cases failed.

In a monograph, entitled *Die Moderne Radikal-operation der Unterleibsbrüche*, Hamburg, 1883, Dr. Leisrink has collated 390 cases, which throw the desired light upon the questions of mortality and efficiency. Of 202 curative operations, that is to say, performed upon reducible herniæ, 187 recovered, and 15 died; of the former, 20⅓ per cent. recurred. Of 188 operations in connection with strangulated hernia, 255 recovered, and 33 died, but nothing is said of relapses.

The combined results of the Liverpool cases, and of those collated by Leisrink, show that of 515 operations for reducible and strangulated herniæ only 9.3 per cent. died, of which

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about 2 per cent. may be ascribed to the strangulation itself, since the mortality of the operation for reducible hernia, as shown by Leisrink, is 7.4 per cent.

The natural conclusions at which we would arrive from a consideration of the foregoing facts are, first, that although the modern operation kills about one patient in every thirteen or fourteen, and fails in about one case in every five in which it is resorted to as a matter of expediency, it none the less is of great value in restoring many persons to comfort and the possibility of earning their living; and, secondly, that it should be practised in all operations for strangulated heruia in which the gut can be returned into the abdomen.

The Hot Water Mania.—We take the following from an editorial in the *Medical News*, February, 2, 1884:

The hot water mania is one of those periodical sanitary epidemics, which, like certain moral epidemics, now and then rage through this country. The secular newspapers have taken it up, and elaborate editorials indicate the interest which the general public has manifested in this supposed new remedy. The persistence of the mania is a proof of the vitality of the system. The epidemic had long since spent its force, if its energy had not been recruited from the aggressive enthusiasm of new converts and disciples.

At the risk of chilling the spirits of hot water disciples and advocates, we are compelled to maintain that the method is not new. It is always an ungracious task to temper enthusiasm and to substitute a sober realism for the free flights of the ardent imagination, but we are restrained by our duty as medical journalists, to the domain of scientific verity.

The use of hot water as a beverage, had its real origin in the method of stomach irrigation inaugurated several years ago by our German colleagues, as a remedy for chronic gastric catarrh. An ingenious and pseudo-scientific New York empiric, bethought himself of hot water drinking as a substitute for hot water irrigation; but Dr. Sangredo had preceded the modern empyric in the hot water practice. In the claim for priority of discovery, we hold that the patron of *Gil Blas*, is entitled to the honors, for did not the system of Sangrado consist in bleeding *ad deliquum animi*, and copious libations of warm water? This interesting historical question settled, we can now proceed to determine the real value of the practice.

——"All the water in the ocean
Can never turn a swan's black legs to white."

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is a saying of Shakespeare; so no amount of mere assertion can prove the value of hot water as a remedy. Sangrado was besought by his pupil Gil Blas to give up a practice which had proved so deadly, but this great medical philosopher, like so many of his ilk in our day retorted "have I not written a book?" which, as it was devoted to proving the value of the system, must not be disgraced by a change of opinion on the part of its author. Surely it is "the irony of fate," to have hot water revived as a remedy, by modern science.

Hot water serves several purposes: it is a means of applying heat to the interior of the body, for a well-instructed patient may drink water at 120° F. The effect of the heat is to dilate the stomach vessels, and thus increase the blood-supply to the gastric glands. An increase of functional activity is thereby induced. The reflex effect of the increased heat is manifest in a considerable stimulation of the solar plexus, the organs of vegetative life, and the circulatory system. The result of such stimulation must necessarily be a widespread increase of functional activity.

Large draughts of hot water act mechanically by dislodging the mucus adherent to the mucous membrane, by dissolving the alimentary refuse, and by washing into the circulation soluble constituents not disposed of in the ordinary process of digestion. The result of this is to increase the primary assimilation in an effective way. To a less extent, draughts of hot water, therefore, wash out the stomach, and prepare the organ for better work, as irrrigation does.

The picture has its sombre side. Water drinking, though the water be hot, is not without its drawbacks. There are those who believe that too much water is an impossibility. The late Dr. John F. Meigs was one of those—an apostle of water-drinking—and he had many followers. Even so good a thing as water may be abused. Too much water taken during the progress of digestion, may so far dilute the gastric juice as to render it unequal to its proper work. The digestive process being thus weakened, a condition of anæmia results. For the purposes indicated above, hot water should be taken either before digestion has begun, or after it is completed. In the use of this agent, as of all other therapeutical remedies, the true principle is to adapt the remedy to the condition present. Hence, it follows that each case must be studied by and of itself, and hot water given or withheld, according to the state of the stomach, or of the general system.

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The Sims Memorial Fund—*To the Medical Profession and Others throughout the World:*—The great achievements of Dr. J. Marion Sims call for some more lasting testimonial than obituaries and eulogies. To him medical science is indebted for much brilliant and original work, especially in gynecological surgery. Those who have been benefitted by his teachings and new operations, and such as have had the direct advantage of his personal skill are among the first to recognize and acknowledge this debt.

To him is due the honor of giving the first strong impulse to the study of gynecological surgery in America.

It is believed that the medical profession everywhere, the vast number of women who owe their relief from suffering directly to him, and those who realize the benefits he first made possible, will gladly unite thus to honor the man through whose original and inventive genius such blessings have been conferred upon humanity.

At the suggestion of many friends, therefore, the subjoined committee has been organized, and it is proposed that a suitable monument be erected to his memory in the city of New York.

To this end the active co-operation of the medical profession and the many other friends of Dr. Sims throughout the world is respectfully solicited. Contributions of one dollar and upward may be forwarded to the journal which has been constituted the treasury of this fund—*The Medical Record*, New York.

FORDYCE BARKER, M. D., *Chairman*,
GEORGE F. SHRADY, M. D., *Secretary*.

Book Notices, &c.

Fat and Blood: An Essay on the Treatment of Certain Forms of Neurasthenia and Hysteria. By S. WEIR MITCHELL, M. D., Member of the National Academy of Sciences; Physician to the Orthopœdic Hospital and Infirmary for Diseases of the Nervous System, etc. Third Edition, Revised, with Additions. Philadelphia: J. B. Lippincott & Co. 1884. 12mo. Pp. 164. (For sale by West, Johnston & Co., Richmond, Va.)

Although this little monograph has been reprinted several

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times, and revised once before, the edition in hand has been thoroughly revised, and almost entirely re-written—much new matter being also added, as we find upon reference to the last edition—and the result is one of the most interesting and valuable essays we have ever met with on the present subject. Even in the small space employed, Dr. Mitchell gives so clearly and concisely a description of those cases of neurasthenia and hysteria which he considers amenable to treatment, that the reader almost loses sight of the importance of the subject treated, in his admiration for the masterly art used in the description. The author claims to have proven by long experience that massage, when properly used, deprives rest in a great measure of the evils often accompanying it, and has found that its value in enabling the patient to bear an almost unlimited milk diet is extremely great, and as he places the utmost confidence in this form of diet in the treatment of certain classes of disease, he draws particular attention to the proper performance of the manipulation. He also finds great value in the use of electricity, preferring the induction current, with interruptions as slow as one in every two to five seconds, in the same forms of ailment, but states that if he were obliged to confine himself to the use of one or the other of these means of treatment, he would have no hesitation in leaving out electricity. We would be glad to place before our readers a synopsis of every chapter but for lack of room, and we confidently advise any physician desiring to understand clearly what the "Weir Mitchell treatment" of rest, seclusion, diet, and massage really is, to make himself master of the contents of this handsome little volume.

A Manual of Practical Hygiene. By EDMUND A. PARKES, M. D., F. R. S., Late Professor of Military Hygiene in the Army Medical School; Emeritus Professor of Clinical Medicine in University College, London, etc. Edited by F. S. B. FRANCOIS DE CHAUMONT, M. D., F. R. S., F. R. C. S., Edin., Professor of Military Hygiene in the Army Medical School, etc. Sixth Edition. With an Appendix Giving the American Practice in Matters Relating to Hygiene. Prepared by and under the supervision of FREDERICK N. OWEN, Civil and Sanitary Engineer. Vol. II. 8vo. New York: Wm. Wood & Co. 1888. Pp. 556. (For sale by West, Johnston & Co., Richmond, Va.)

In our January issue we noticed Vol. I of this standard work, and this, the November number of Wood's Library of Standard Medical Authors, completes the full manual. All we had to say in praise of the preceding volume we can

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only repeat in favor of the one under consideration. This volume deals first with practical questions concerning Habitations, Removal of Excreta, Exercise, Clothing, Climate and Meteorology. Great attention is paid to the means of preventing some of the more common diseases, and modes of Disinfection and Deodorization are fully discussed. The Service of the Soldier in connection with hygiene, is treated at length, and an appendix giving working formula for volumetric analysis, etc., closes this portion of the book. The American Appendix covers 140 pages, and a consideration of the methods of the study of Sanitary Science in this country is carefully given. No practitioner at all interested in sanitation can afford to be long without this valuable manual.

Editorial.

Code of Ethics in the New York State Medical Society.—At the evening session of the Medical Society of the State of New York, held at Albany, February 5, 1884, resolutions were brought before the body to repeal the new code, and restore the old one. After a full debate, the ballot was taken, resulting in 105 votes for the affirmative, and 124 for the negative. As the President, Dr. Alexander Hutchins, had previously ruled that a two-thirds affirmative vote was required for the passage of the resolutions, the defeat was signal, the old code supporters having announced that less than one third of the Society member, and less than one-fifth of the profession in the State favored the new code.

After the session of the Society were concluded, a number of the most prominent adherents of the movement to restore the old code met at the Delevan House, Albany, and took measures for the organization of a new State society, to be known as the New York State Medical Association. We earnestly hope that the promoters of the new society will not sever their connection with the old established one, for, as the *New York Medical Journal* remarks, "it is in the nature of things that the rancor engendered by the ethical strife will vanish in due course of time."

The Proposed Appropriation of $7,500 Annually to the Medical College of Virginia, on condition that each member of the General Assembly of Virginia would have the privilege of sending one student free of charge, of course proved a failure. The proposition seemed so preposterous that we

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paid no attention to it when we saw the suggestion announced in the daily papers—after our February issue. The result would have been to admit 140 students annually free of tuition, and to transform the Medical College of Virginia into a political machine.

The Clinical Brief and Sanitary News has been consolidated with the *Cincinnati Medical News*. Dr. Charles A. L. Reed, formerly Editor of the first named journal, retires for the time from medical editorial life. He was a good journalist. The *Medical News* is to be congratulated on its ability to secure such a consolidation.

Obituary Record.

Dr. Robert Thomas Coleman died early on the morning of March 4th, 1884, at his home in Richmond, Va. He had been confined to his house for two months or more. His fatal illness, it is said, was Bright's disease. He was Professor of Obstetrics in the Medical College of Virginia. He was a fine lecturer, and always kept the attention of his auditors. He was a good teacher, as attested by the many evidences of his worth in this direction by the numerous graduates of the College who have passed under his tuition. The esteem in which he was held is expressed by the resolutions adopted by the meetings of the Class of Students of the Medical College of Virginia and of the Richmond Academy of Medicine, which we append. The Faculty, also, passed suitable resolutions, to which we wish we had space to devote—although not requested to refer to their action.

Dr. Coleman was born in Hanover county, Va., September 3rd, 1830. He graduated at the University of Virginia and afterwards (in 1851) at Jefferson Medical College. After a connection of two or three years with Blockley Hospital, he returned to Virginia in 1854. Soon after his return to Virginia, he was elected Lecturer on Clinical Medicine in Blockley Hospital Medical Institution, Philadelphia. He declined acceptance of this proffer of office. He remained in Richmond, Va., until the outbreak of the Civil War, when he went as Surgeon of the 21st Virginia Regiment. On the organization of the famous "Stonewall Division," he was made its Surgeon-in-Chief. His Confederate Army record was excellent.

After the war, Dr. Coleman resumed practice in Rich-

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mond. On the re-organization of the Medical College of Virginia in 1865, he was elected Professor of Obstetrics, which position he held until his death. He was a member of the American Medical Association, of the Medical Society of Virginia, of the Richmond Academy of Medicine, etc.

His funeral ceremonies occurred at the First Baptist church, of this city, of which he was a prominent member. The profession attended the services in a body, and the students of the College served as a special escort.

Resolutions of Respect by the Medical Profession of Richmond:

Dr. R. T. COLEMAN is dead! This was among our first greetings this morning. It was handed from one to another, and universal sorrow was the result. How much was meant by this announcement of the passage of another soul from time to eternity only we who knew him can understand. And such a soul! So rich in all that make a man chief among his fellows.

His geniality, his good fellowship, his great kindness of spirit, his broad and generous regard for his neighbor, of whatever manner or condition, and his liberal hospitality, endeared him to all who knew him well. Hence, as friends we mourn his death.

As a professional man he stood among the highest, and the demands upon his skill were almost more than his time could meet. He gained the love of his patients by his gentleness and sympathy in their afflictions and sorrows. Every year of his labors increased the respect and affection of his brethren, and heightened the confidence and admiration of the Profession, who looked up to him as one of its chiefs. He was a strong man in mental abilities and acquirements, and in his death a shining light has gone out amongst us; and so it is that we, his brethren, who rested in his strength, meet to mourn his loss.

As a teacher in the Virginia Medical College he was among the worthiest that ever occupied a chair in that institution, and his learning and eloquence gave lustre and authority to his teachings. Cut off in his prime, when most useful, his place will be hard to fill, and his associates will be daily reminded of the sad loss that has befallen them.

But if his friends, his brethren and his associates so mourn him departed, what must be the vacancy he leaves in that home where as husband and father he reigned supreme, which his presence made so happy by his genial good nature, his brilliant conversation, and his ready fund of anecdote and story. What a loss he must be there!

Into the sacred privacy of family affliction, into the desolate grief of wife and children, we can only intrude to express our deep sorrow and heartfelt sympathy, trusting that God in his mercy has taken our friend for his own good; and as He tempers the wind to the shorn lamb, so may He give strength to the bereaved family to accept their loss with the Christian spirit of resignation to the decrees of Providence.

Resolutions of Respect by the Students of Virginia Medical College:

The icy hand of death has been laid on the kind friend and faithful teacher; a voice never tiring in eloquent pleas for virtue, truth and science has been hushed; the gentle hand lies palsied, and the Master claims his own in the spotless soul of Dr. ROBERT T. COLEMAN, the noble physician, gifted teacher, and Christian gentleman.

Resolved, That in the death of Professor Coleman the classes of '84 and

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'85 recognize and bow to the decree of an allwise Providence, but deplore their great loss of an instructor and exemplar ennobled by his faith in the truth and virtue of those for whom he spent his life's service, and the earnest efforts to sow the seeds of that same faith in the hearts of his pupils.

Resolved, That in cherishing his memory and keeping before us the noble examples instilled by precept and practice, we will have an incentive to higher and nobler aims, and to the accomplishment of deeds worthy of him who so plainly exemplified the ideal physician and true man.

Resolved, That we extend our united and heartfelt sympathy to the loved ones so deeply bereaved, and pray the God of the widow and fatherless to pour the oil of His consolation into their wounded hearts, and in His own fit time unite them "beyond the farewell and the greeting" with the loved one gone before.

Dr. George William Semple, of Hampton, Va., passed from life to eternity November 15th, 1883. He was born in Williamsburg, Va., March 10th, 1810; hence, at the time of his death, he was in his seventy-fourth year. He had been in failing health for over a year before his death. He was the second son of Judge James Semple, of Virginia, by his second marriage, and the grandson of Rev. James Semple, of the Church of England, who was pastor of the Episcopal church in New Kent county, Va. His mother's maiden name was Miss Joanna McKenzie, daughter of Dr. William McKenzie, of Manchester.

We append some well made remarks by an intimate friend, Capt. J. Pembroke Jones, of Hampton, Va.—a friend who knew him long and intimately.

In 1835, Dr. Semple married Miss Christian, daughter of Col. John C. Pryor, of Elizabeth City county, Va. (His half brother, Dr. John Semple, had previously married her sister.) Dr. Semple and wife went at once to Alabama in company with several of his family. There he practised his profession successfully: but in a year he lost his wife, who left an infant daughter, who has been a ministering angel to her noble father, and who is fully worthy to be his daughter.

In 1838, he married Miss Emily, daughter of Richard Booker, of Elizabeth City county, Va., and returned to Alabama. After a few years, owing to ill health in his family, he returned to Virginia and settled in Charles City county; but about 1847 he moved to Hampon, Va., where he spent the rest of his life, except the period of war.

From his second marriage there were nine interesting, gifted children, most of whom grew up to maturity and older, but one by one, after entwining themselves about their loving father's heart, they have withered and he has buried all but two, and his wife shared the same fate and died in 1858 after years of lingering illness. It has been the saddest spec-

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tacle this people has beheld to see this loyal, loving father year after year take his treasures to the churchyard. The manner in which he bore these afflictions touched all hearts. *His* heart ached, but it became more alive to the sorrows of others. He spent his life in going about doing good. "I do not think I have ever known a better man or one more useful. He was a thorough gentleman, a sterling friend, a consistent Christian, and a devoted father. He always laid in wait to pay back an injury, but he paid it in kindness, in services rendered. There are few families within the radius of his work that have not known how good, gentle, kind, and able he was. For years and years he was senior warden of St. John's Episcopal church at Hampton, and his beautiful life, amid sorrows of his own, added to all those of other people, seemed to honor the office. He was genuine, modest, faithful, refined, cultured, and brave; and he was an honor to the State which could develop such a life."

Dr. Semple was a warm friend of the Medical Society of Virginia from its organization in 1870. In all that looked to the interests of the medical profession, generally, and to those of this State in particular, he was ever active; and his influence always carried a conviction that but few others could impress. At the meeting of the Society at Old Point Comfort, Va., in 1881, he was elected President; but while he made every effort to do so, he was unable to attend the meeting of 1882, at Fauquier White Sulphur Springs, during which he was to preside. His health was then too feeble. He was missed then, and his feebler, sinking condition prevented his attendance at the session a year later at Rockbridge Alum Springs, Va. He was not a frequent contributor to medical literature; but he never wrote that he did not state some important truth, and in some instances advanced original opinions or announced a new fact. All that Capt. Jones has said, in regard to Dr. Semple's personal life, was exemplified by his professional career. He has died revered by his personal associates, admired by his professional acquaintances, and all that knew him feel that affliction has fallen upon them. His memory is honored.

Dr. Elisha Harris, of Albany, N. Y., died on January 31st, 1884, in his sixtieth year, after a short illness. The greater portion of his life was spent in executive and statistical work in connection with various sanitary boards, and the amount of labor he has performed in the field of sanitation has rarely if ever been equalled.

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